THE DETERMINANTS OF THE FINANCIAL DERIVATIVES' USAGE WITHIN SME BUSINESSES IN PAKISTAN

By

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ABSTRACT

The usage of financial derivatives has been recognized in improving the financial performance of an organization. However, few studies have explored the usage of financial derivatives within small and medium enterprises (SMEs) particularly within SMEs in Pakistan. This gap provides the impetus for this research to establish the determinants of financial derivatives' usage by SMEs in Pakistan. This research was guided by the following research problem: 'how and why the determinants of the financial derivatives' usage could be established within SMEs in Pakistan?' A qualitative study using the convergent interview method was conducted to investigate the research issues. The interviewees were identified using the purposive-snowballing sampling technique. Nineteen (19) convergent interviews were conducted to confirm the determinants of financial derivatives' usage. The thematic analysis technique was used to analyze the data. The research findings confirmed a total of twenty four (24) determinants of financial derivatives' usage. Five of these determinants, namely, time horizon, un-invested cash, reduction in overall cost, risk appetite, and lack of established markets are newly emerging determinants and contribute to the body of knowledge. In addition, six (6) core and six (6) non-core financial determinants are confirmed. Also, two (2) core and ten (10) non-core non-financial determinants are confirmed. This research provides two theoretical implications, generating new knowledge for theory building and contributing to existing knowledge in terms of the newly emerging determinants. The methodological implications include the power of using qualitative convergent interviews and the snowball sampling technique. The practical implications include guidelines to the Chief Financial Officers (CFOs) to optimize the utilization of financial derivatives within SMEs in Pakistan. Finally, this research provides policy implications for government authorities and agencies in formulating the regulations and procedures for the usage of financial derivatives by the SMEs in Pakistan.

Keywords: financial derivatives, convergent interview, snowball sampling, SMEs, Pakistan

ABSTRAK

Penggunaan terbitan kewangan telah diiktiraf dalam meningkatkan prestasi kewangan sesebuah organisasi. Namun segelintir kajian sahaja mengkaji penggunaan terbitan kewangan di kalangan perusahaan kecil dan sederhana (PKS) khususnya di kalangan PKS di Pakistan. Jurang ini merupakan dorongan bagi kajian ini untuk mengesahkan penentu penggunaan terbitan kewangan oleh PKS di Pakistan. Kajian ini berpandukan kepada permasalahan kajian berikut: 'bagaimana dan mengapa penentu penggunaan terbitan kewangan boleh dilaksanakan di kalangan PKS di Pakistan?' Kajian kualitatif yang menggunakan kaedah temubual bertumpu telah dijalankan untuk menyelidik isu-isu kajian. Calon-calon temubual telah dikenalpasti dengan menggunakan teknik persampelan 'snowball'. Sembilan belas (19) temubual bertumpu telah dijalankan untuk mengesahkan penentu penggunaan terbitan kewangan. Teknik analisis tematik digunakan untuk menganalisis data. Hasil kajian ini mengesahkan sejumlah dua puluh empat (24) penentu penggunaan terbitan kewangan. Lima daripada penentu ini, iaitu tempoh masa, tunai tidak dilabur, pengurangan kos keseluruhan, selera risiko dan kekurangan pasaran yang kukuh merupakan penentu baru yang telah dikenalpasti dan menyumbang kepada ilmu. Selain itu, enam (6) penentu kewangan teras dan enam (6) penentu kewangan bukan teras telah disahkan. Juga, dua penentu bukan kewangan teras dan sepuluh (10) penentu bukan kewangan bukan teras telah disahkan. Penyelidikan ini menghasilkan dua implikasi teori iaitu menjana ilmu baru bagi pembentukan teori dan menyumbang kepada ilmu sedia ada dari segi penemuan penentu baru. Implikasi methodologi yang diberikan termasuklah kekuatan dalam penggunaan temubual bertumpu secara kualitatif dan kaedah '*snowball*' dalam persampelan. Implikasi praktikal yang diberikan termasuk panduan kepada Ketua Pegawi Kewangan (CFOs) untuk mengoptimumkan penggunaan terbitan kewangan dalam PKS di Pakistan. Akhirnya, kajian ini memberi implikasi polisi kepada pihak kerajaan dan agensinya dalam merangka regulasi dan prosedur penggunaan terbitan kewangan di kalangan PKS di Pakistan.

Kata kunci: terbitan kewangan, temubual bertumpu, persampelan snowball, PKS, Pakistan

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LIST OF ABBREVIATIONS

APEC	:	Asian-Pacific Economic Cooperation
ASC	:	Accounting Standard Codification
ASEAN	:	The Association of Southeast Asian Nations
AT	:	Agency Theory
BIS	:	Bank for International Settlements
CA	:	Chartered Accountant
CAPM	:	Capital Asset Pricing Model
CFO	:	Chief Financial Officer
DMU	:	Decision Making Unit
FASB	:	Financial Accounting Standard Board
FCMA	:	Fellow of Cost and Management Accountant
FRA	:	Forward Rate Agreement
FX	:	Foreign Exchange
GDP	:	Gross Domestic Product
IDR	:	Indonesian Rupiah
IFM	:	The Institute for Financial Markets
IMF	:	International Monetary Fund
INR	:	Indian Rupee
IR	:	Interest Rate
ISDA	:	International Swaps and Derivatives Association
LC	:	Letter of Credit
LIBOR	:	London Inter Bank Offer Rate
LPT	:	Liquidity Preference Theory
MMT	:	Modigliani and Miller Theory
MPDR	:	Ministry of Planning, Development and Reforms
MSMED	:	Micro, Small and Medium Enterprise Development
NSDC	:	National SME Development Council
PKR	:	Pakistan Rupee
POT	:	Pecking Order Theory

RM	:	Malaysian Ringitt
SBP	:	State Bank of Pakistan
SECP	:	Securities and Exchange Commission of Pakisatn
SME	:	Small and Medium Enterprise
SMEDA	:	Small and Medium Enterprise Development Authority
TDAP	:	Trade Development Authority of Pakistan
TOT	:	Trade-Off Theory
FDs	:	Financial Derivatives

CHAPTER ONE

INTRODUCTION

1.0 Introduction

The current chapter provides the background of this research work. The main problem due to which this research is undertaken is addressed. The first chapter also discusses the justification of research problem, research issues and scope of the current research related to the usage of the financial derivatives particularly within Small and Medium Enterprises (SMEs) in Pakistan. Moreover, it elaborates how this dissertation outlining the process is prepared. This chapter has been divided into ten (10) main sections to make it concise as shown in figure 1.1.

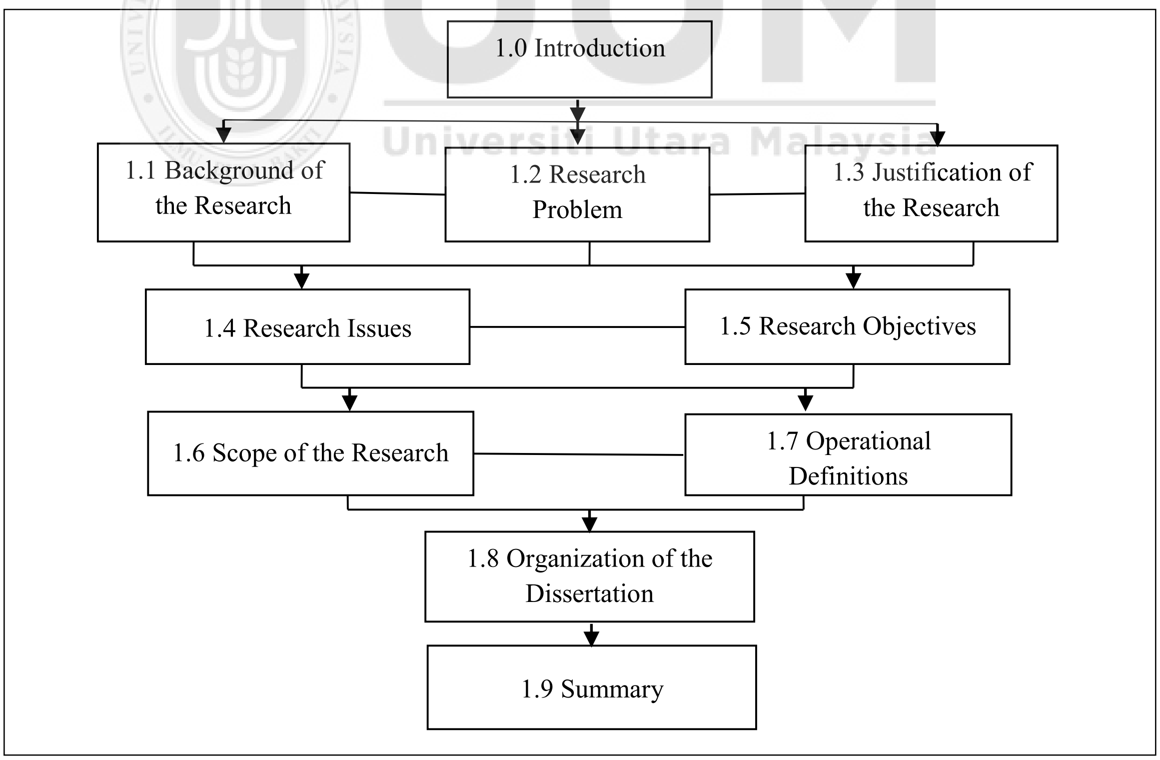


Figure 1.1
The flow chart of chapter one
Source: developed for this research

Section 1.0 gives the general introduction of the chapter, while the background of this research is discussed in section 1.1. The major problem faced by SME businesses in Pakistan, which leads to the problem statement for this research is highlighted in section 1.2. The justification of the research problem is explained in section 1.3. Section 1.4 discusses the research questions followed by research objectives for the current research in section 1.5. Moreover, section 1.6 describes the scope of this research. Section 1.7 consists of operational definitions used in this research. The overall organization of this dissertation is explained concisely in section 1.8. Lastly, chapter one is summarized in section 1.9.

1.1 Background of the Research

The previous section provided the introduction of this chapter one. This section discusses the background of the research. The evolution of international finance took place due to international trade and business. The existence of nations affected the economic activities of organizations, governments and businesses (Madura, 2011). The international trade played pivotal role in the growth and prosperity of participating countries (De benedictis & Tajoli, 2017). The role of international finance increased parallel to the huge increment in the magnitude of international trade due to the evolution of globalization (Lane & Milesi-Ferretti, 2018).

International finance is a broad term, which deals with the exchange rate, inflation rate and investment in international debt securities and it determines the relative values of the currencies and helps investors to save money (Obstfeld, 2009). Many types of risks such as currency risk, foreign exchange risk and fluctuations in the prices of commodities and assets took place as a result of international trade (Frankel, 1984). Financial derivatives are one of the financial instruments used in international finance to mitigate the above described risks and to increase firms' performance (Merton, 1995).

The history of derivatives evolved in the fourth millennium B.C. Mesopotamia was considered the main point of commerce where trading activities had taken place. For trading derivatives, Royal Exchange in London was the foremost exchange where forward contracts were traded. The first future contracts market was Yodoya rice market in Osaka in Japan during the 1650s (Gautam & Kavidayal, 2016). Therefore, the usage of derivatives had increased hastily due to the emergence of foreign exchange by import and export and increment in market size around the world.

There are four main reasons to use derivatives in the firms. At first, derivatives are used to reduce the exposure of risk. Through hedging, the cash flows from the derivatives are used to offset or mitigate the cash flows from a prior market commitment (Sundaram & Das, 2011). Secondly, the motive of derivatives use is speculation aiming at profiting from the anticipated market movements. Speculation increases the risk exposure, thus, the potential gain or loss is magnified relative to the initial investment. Thirdly, the use of derivatives implies less transaction costs (such as commission costs and trading costs) (Bartram, Brown & Fehle, 2009). The derivatives market success constitutes on the fact that they make the financial markets more efficient. Borrowing and lending occurs at a lower cost when derivatives are used, resulting in lower transaction costs. Lastly, derivatives are used through asset management activities and regulatory restrictions to maximize the return on investments (Sill, 1997).

There are three different user perspectives on derivatives including the end-user perspective, the market-maker perspective and the economic observer perspective. End users include corporations, investment managers and investors who use derivatives in order to achieve their goals such as speculation, risk management, cost reduction and regulation avoidance (Kawaller & Smith, 2017). Market-makers who usually are traders or intermediaries between different end users, buy from end users that sell at low price and sell to end users who want to buy at the higher price. Commissions for the trading transactions might be charged during the process. The final perspective is that of the economic observer, whose role is to regulate and supervise the markets (Finan, 2008).

The trading of derivatives is increasing with the passage of time as the new organizations' trading counters are established. Especially in the financial derivative market, over the counter and swaps derivatives have been originated until 1980's. Later on, International Swaps and Derivatives Association (ISDA) was incorporated in order to increase the volume of financial derivatives' trading (Mihaljek & Packer, 2010). At that time, derivatives had become hot topic and researchers started conducting researches to inquire impacts and factors of the financial derivatives in the markets of developed countries (McClintock, 1996). Financial Derivative disclosure requirement had been proclaimed by the Financial Accounting Standards Board (FASB, 2008). It makes certain that listed firms are entailed to disclose their contracts of derivatives in the financial statements. The usage of financial derivatives is increasing globally as shown in table 1.1 and figure 1.2.

Table 1.1
Volume of Over-the-Counter (OTC) Derivatives Globally (in billions of US dollars)

Volume of Over the Counter Derivatives Globally (in billions of US dollars)										
	Years and Percentage									
Types of Derivatives	**2013**	**%**	**2014**	**%**	**2015**	**%**	**2016**	**%**	**2017**	**%**
Foreign Exchange Derivatives	73,121	10.55	75,043	11.95	70,446	14.30	78,781	16.33	88,429	16.30
Interest Rate Derivatives	561,299	81.01	505,443	80.48	384,025	77.94	385,514	79.91	435,206	80.23
Equity Linked Derivatives	6,821	0.98	6,968	1.11	7,141	1.45	6,253	1.30	6,964	1.28
Commodity Derivatives	2,458	0.35	1,869	0.30	1,320	0.27	1,671	0.35	1,762	0.32
Credit Derivatives	24,349	3.51	16,399	2.61	12,294	2.50	10,103	2.09	9,966	1.84
Others	24,860	3.59	22,281	3.55	17,481	3.55	100	0.02	112	0.02
Total	**692,908**	**100%**	**628,003**	**100%**	**492,707**	**100%**	**482,422**	**100%**	**542,439**	**100%**

Source: developed based on Banks for International Settlements (2017).

From the above table 1.1 (row last, column 2 and figure 1.2), it can be observed that the volume of derivatives in 2013 is \$ 692,908 billion, which is the highest in the five years. In 2014, 2015 and 2016, the total volume of derivatives is \$628,003 billion \$492,707 billion and 482,422 respectively as shown in table 1.1 (last row, column 4, 6, 8 and figure 1.2), which decreased in all three years due to some world crises and drastic change in oil prices but in 2017 the volume of derivatives is $542439 and it again started increasing (last row, column 10 in table 1.1 and figure 1.2). Therefore, it is concluded that overall usage of financial derivatives is increasing globally with the passage of time. The trend of derivatives globally is depicted by a graph to see the close picture in figure 1.2.

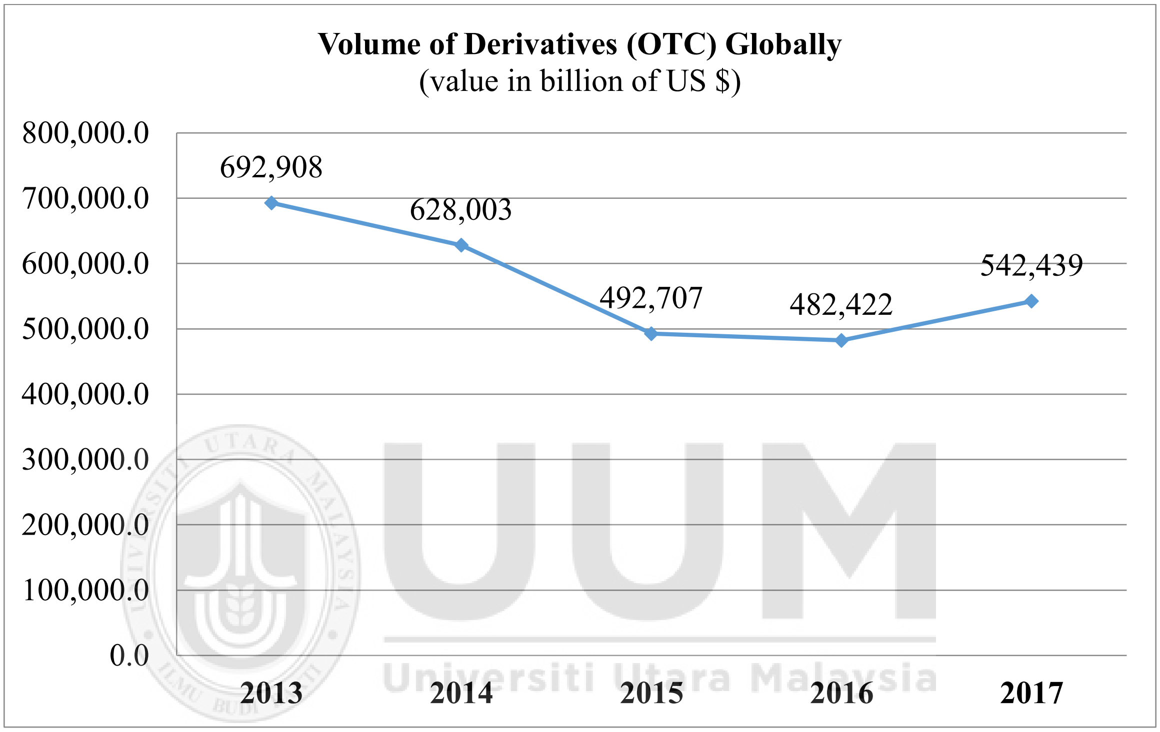


Figure 1.2
Trend of Over the Counter Derivatives Globally

Source: developed for this research

There is a corporate competitive environment in the world and all the regions such as Latin America, North America, Europe, Asia and others are competing with one another to expand their businesses and make their economic environment more stable and prosperous. Therefore, the Asian region is not far behind from other regions (IFM, 2017). Futures and Options are the main components of the financial derivatives. The usage of futures and options contracts and their increasing trend based on regions to understand the importance of financial derivatives is shown in table 1.2.

Table 1.2
Volume of Futures and Options Contracts by Region

Volume of Futures and Options Contracts by Region				
Regions	**2016**	**2017**	**Growth Rate**	**Market Share**
Latin America	1,615,293,377	1,971,927,150	22.08%	7.83%
Europe	5,179,761,861	4,936,045,987	-4.71%	19.59%
Asia	9,180,874,700	8,809,399,561	-4.05%	34.96%
North America	8,590,060,261	8,886,461,060	3.45%	35.27%
Others	654,024,124	595,154,992	-9.00%	2.36%
Total	**25,220,014,323**	**25,198,988,750**	**---------**	**100.00%**

Source: developed based on The Institute for Financial Markets (IFM, 2017).

The two years' volume of futures and options' contracts, growth rate and market share of different regions namely Latin America, Europe, Asia, North America and others is summarized in table 1.2. The volume of futures and options decreased to 25,198,988,750contracts in 2017 as compared to 25,220,014,323contracts in 2016, which is very small difference as shown in the last row of table 1.2. This decrease in volume is because of fluctuations in oil prices, commodities prices and increasing demand and supply of underlying assets due to the existence of the competitive market. The growth rate in Latin America region is 22.08%, which is the highest in the world as shown in table 1.2 (row 1, column 4) and figure 1.3. The North American region is at number two in the rankings of five regions and its growth is 3.45% as shown in table 1.2 (row 4, column 4) and figure 1.3. The growth rate of futures and options contracts in three regions including

Europe, Asia and Other regions decreased by 4.71%, 4.05% and 9.00% respectively as shown in table 1.2 and figure 1.3. In addition to growth rate, the statistics of IFM provides the market share of all the regions. North America has 35.27% share in the whole future and options' market, which is the highest among all other regions. Asian region has 34.96% share (row 3, last column in table 1.2 and in figure 1.3) in the whole future and options' market, which is second to North America (row 4, last column, in table1.2). Moreover, Europe comes at number three (row 2, last column in table 1.2 and figure 1.3) and Latin America at number four in table 1.2 (row 1, last column). Therefore, it is concluded that the market share of Asian region is more than all other regions except North America. Thus, the usage of financial derivatives in Asia is more than other regions particularly in future and options contracts. The close picture of the trend of futures and options contracts regarding market share and growth rate by region is shown in figure 1.3.

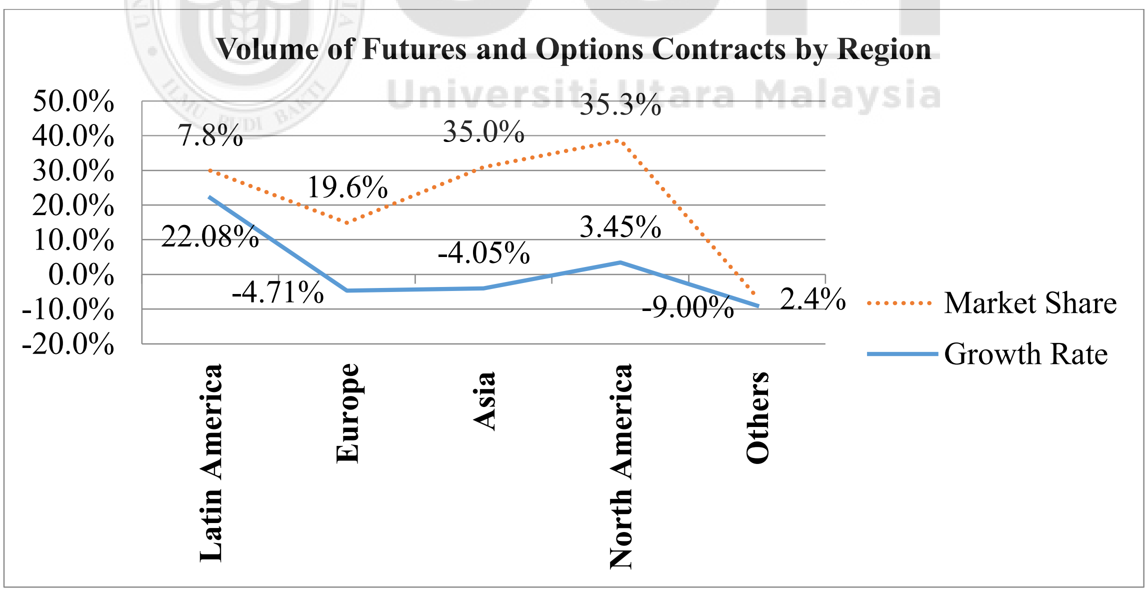


Figure 1.3
Regional Trends of Futures and Options' Contracts

Source: developed for this research

In current times, the import and export businesses have been significantly increased due to globalization (López-Villavicencio & Mignon, 2017). The interest rate and foreign exchange fluctuations in one country affect their business partner countries (Kevin, 2015). The risks of import and export related firms have also increased (Maggiori, 2017). In order to control these risks, firms engage themselves with different risk management techniques. Financial derivatives which firms utilize to mitigate their risks at certain level are also one of the risk management techniques (Al-amine, 2005).

The usage of financial derivatives has improved and contributed in the financial performance of the firms (Chen, Han & Zeng, 2017). The usage of financial derivatives influenced and changed the way firms manage their business risks in more efficient and effective way (Pandian, 2009). It cannot be denied from the fact that the usage of financial derivatives play very pivotal and crucial role in the triumph of today's businesses especially to manage risk that is faced by every business of large and small scale in order to increase its financial performance (Kleist & Mallo, 2011).

1.2 Research Problem

The previous section described the background of this research. This section discusses about SMEs and financial derivatives within SMEs in Pakistan in formulating the research problem of this research. SMEs play a vital role in the economic growth of a country and are considered the backbone of economies particularly in Asia (Soomro& Aziz, 2015). SMEs have substantial contribution in the Gross Domestic Product (GDP), employment and export earnings of the countries (Imran, Aziz & Hamid, 2017). The contribution of

SMEs of Asian Countries in GDP, employment and export earnings of the country is shown in table 1.3 and figure 1.4.

Table 1.3
Comparison of SMEs' Contribution in GDP, Export and Employment in Asian Region

Regional Comparison of SMEs' Contribution			
Country	**In GDP %**	**In Export %**	**In Employment %**
South Korea	49	31	88
Thailand	39	30	75
China	36	20	61
Malaysia	32	19	59
Pakistan	30	25	78
Bangladesh	23	11	40
India	17	40	40

Source: modified based on Yoshino and Wignaraja (2015).

Table 1.3 and figure 1.4 summarize and analyze the SMEs' contribution to the country's GDP, exports and employment of seven countries in the Asian region. The contribution of SMEs to GDP is explained first. SMEs in South Korea contribute 49% of GDP, which is the highest out of the seven countries, while SMEs in India come at last number, which contributes 17% of GDP. The contribution of SMEs in Thailand and China is 39% and 36%, respectively. SMEs in Malaysia and Pakistan contribute 32% and 30% respectively, which indicates enough contribution to the GDP of these countries. The contribution of SMEs in Bangladesh is 23% in GDP.

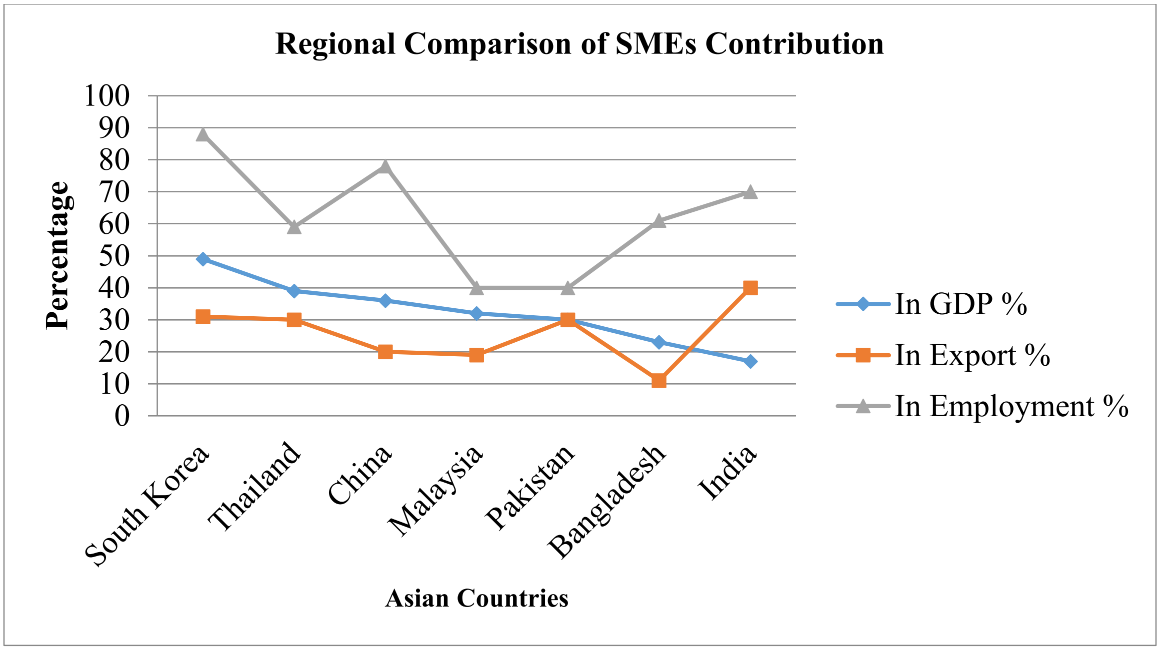


Figure 1.4
Asian Region Comparison of SMEs Contribution in GDP, Export and Employment

Source: developed for this research

Secondly, SMEs contribute large part in the exports of the countries as shown in table 1.3 (row 2-8, column 3) and figure 1.4. SMEs in India contribute 40% in the exports, which is at number one out of seven countries in Asian Region. In contrast, SMEs in Bangladesh contribute 11% in the exports, which is the lowest. The contribution of SMEs in South Korea and Thailand is 31% and 30% respectively. Moreover, SMEs in Pakistan and China contribute 25% and 20% to exports respectively. Further, the SMEs in Malaysia contribute 19%. Thirdly, SMEs have a large contribution to the employment of the countries as shown in table 1.3 (row 2-8, column 4) and figure 1.4. In South Korea, SMEs contribute 88% in employment, which is the highest in seven countries of Asian regions while SMEs in India and Bangladesh contribute 40% in employment, which is the minimum. The contribution of SMEs in Thailand and Pakistan is 75% and 78% in employment respectively. In addition, the SMEs in China contribute 61% to the employment and in Malaysia SMEs contribute about 59%.

It is concluded from the above statistics in table 1.3 and figure 1.4 that SMEs' performance can enhance the country's economic performance while contributing more to GDP, export and employment of the country. Moreover, the number of SMEs in Pakistan is 1.73 million (Imran, Aziz & Hamid, 2017) with 14.9 million employees, exports' earnings of $18.2 billion (72% of total) and their contribution to the GDP of the country is PKR 9.4 trillion (40% of total) (MPDR, 2014).

The government of Pakistan formulated vision 2025, which expects to increase the number of SMEs in Pakistan to 2 million with 25 million employees and increase the SMEs export earnings to $54 billion. Pakistan vision 2025 expects to increase the SMEs contribution in GDP to PKR16 trillion from PKR 9.4 trillion (MPDR, 2014). Therefore, SMEs are the backbone for the economic growth of the country and their importance cannot be ignored.

In a different window, the overall export performance of Pakistan is decreasing drastically since last few years (Khan & Abasyn, 2017). When export performance decreases, it directly affects the foreign exchange of the country negatively and casts the country budget into deficit (MPDR, 2014). The last five years export performance of Pakistan which is decreasing every year is shown in table 1.4.

Pakistan exports have been decreasing since last few years due to which the foreign reserves have been decreasing and the government has been facing a deficit in its annual budget as shown in table 1.4. The export performance of Pakistan in the year 2013-14 showed an export performance of $ 25,109 million, which is increasing but with decreasing trend as shown in table 1.4 (row 3, column 2). The increase in export in 2013-14 was 2.65% as compared to 2012-13 while in 2013-14 this rate of increase decreased to 2.65%, which is low as compared to 2012-13, that is 3.54% (row 3-4, column 3, in table 1.4). In the year 2014-15 and 2015-16 export performance decreased to $ 23,667 million and $ 20,786 million respectively as shown in table 1.4 (row 5-6, column 2) and this decrease is 5.74% and 12.17% respectively (row 5-6, column 3, in table 1.4). There is still decrease of 1.75% in the year 2016-17 as shown in table 1.4 (row last, column 3).

Table 1.4
Statistical Summary of Export Performance of Pakistan from 2012-2017

Export Performance of Pakistan in Five Years		
Years	**Export (**value in million US $)	**% Change**
2012-2013	24,460	3.54%
2013-2014	25,109	2.65%
2014-2015	23,667	-5.74%
2015-2016	20,786	-12.17%
2016-2017	20,422	-1.75%

Source: developed based on State Bank of Pakistan (SBP, 2017).

The poor performance of exports is due to low expertise and poor financing along with many other reasons (Fatemah & Qayyum, 2018). The government formulated vision 2025 to overcome the decrease in exports of the country and to fill the deficit gap by bringing more foreign reserves in their country. The Ministry of Planning Development and

Reforms (MPDR) decided to increase its exports from $ 25 billion to $ 150 billion by focusing on all the sectors (MPDR, 2014).

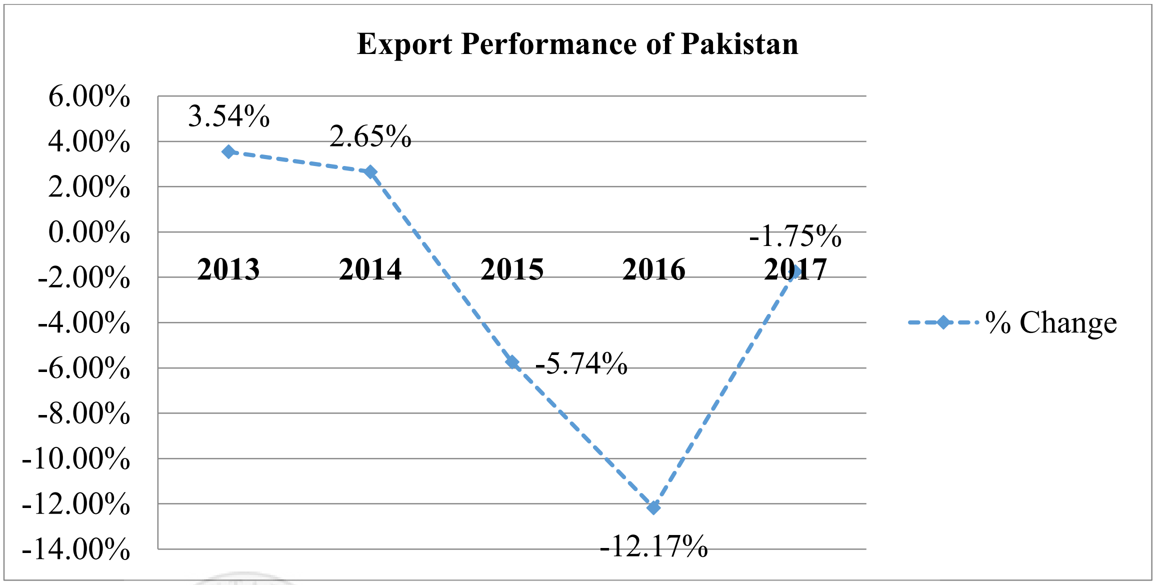


Figure 1.5
Trends of Exports Performance in Pakistan

Source: developed for this research

Based on the above discussion on the performance of SME businesses and their evaluation with respect to their contribution in export performance, employment and GDP, it is very obvious that the current performance of SMEs is not enough to meet the government vision 2025. Therefore, improvement in the performance of the SMEs of Pakistan and its constant continuation is major challenge, which identifies a gap to be filled.

The commitment of using financial derivatives is not exclusive to the large firms but it is accessible and available to the SME businesses. The usage of derivatives is found to bring the improvement in SMEs performance in this competitive environment (Hrubosova & Kamenikova, 2007). Few studies have been conducted on commodity derivatives, weather derivatives and financial derivatives particularly on SMEs. It has been suggested to conduct studies on SME businesses in perspective of financial derivatives' usage in order to enlarge their growth (Kula, 2005; Pennings & Garcia, 2004; Ehrlich, Woodward & Tiong, 2012; Chong, Chang & Tan, 2014).

Pakistan Mercantile Exchange (PMEX) deals in commodity derivatives along with financial futures. Those SMEs, which are engaged with import and export at vast level use Karachi Interbank Offer Rate (KIBOR) future contracts, which PMEX deals (Pakistan Mercantile Exchange, 2016).Therefore, the paucity of literature on the usage of financial derivatives in SME businesses in Pakistan motivates the researcher to explore this matter comprehensively, focusing on the following research problem "how and why the determinants of the financial derivatives' usage could be established within SME businesses in Pakistan?"

1.3 Justification of the Research

The previous section discussed the research problems of this research. This section justifies this research topic based on key factors connected to above discussion of this research. The significance of this research can be analyzed from three different gaps which are the tremendous growth of SMEs in Pakistan, the growth of financial derivatives in Pakistan and the gap in the existing literature.

The tremendous growth of SME businesses in Pakistan. The importance of SMEs has been acknowledged by the government in the current competitive business environment

(MPDR, 2014). SME businesses contribute a large portion in the overall businesses of Pakistan (Imran, Hamid & Aziz, 2018). SMEs constitute 90% of all the businesses in Pakistan. The contribution of Pakistan SMEs in the national GDP is 40% and in the employment is 78%. In addition, Pakistan SMEs contribute 30% in the export of the country (Zafar & Mustafa 2017). After admitting the significant contribution of SMEs in Pakistan GDP, employment and export, the government of Pakistan emphasized the importance of SMEs and included them in Pakistan vision 2025. The purpose of vision 2025 is to envision Pakistan among top twenty five economies of the world and upper middle income country. According to this vision 2025, it is expected to increase the contribution of SMEs in the nation GDP, export and employment to PKR 16 trillion, PKR 5.4 trillion and 25 million respectively by 2025. These statistics show the importance of SMEs to bring radical changes in their business policies.

From the above context, it is critical and necessary for the SMEs to improve their performance, expansion and competitiveness domestically as well as globally by using financial derivatives because financial derivatives provide opportunity to the SMEs to increase their export by making more contracts with their counter parties in order to increase their volume of exports, increase their debt capacity, take benefit of exchange rate volatility and interest rate volatility. Therefore, it is significant for the SME businesses to identify and understand the determinants of the usage of financial derivatives to improve their performance.

The growth of financial derivatives within SMEs in Pakistan. The usage of financial derivatives started in 2003 in Pakistan stock market. The Financial Derivative Business Regulations (FDBR) was laid down by State Bank of Pakistan (SBP) and it was also emphasized that 50% of exchange trading will be held in derivatives in near future (Iqbal, 2008). It is important to mention here that global financial crisis did not disturb the Pakistan financial sector and Pakistan domestic markets remained invulnerable largely due to the integration of domestic markets, international exposure and easy as well as innovative use of derivatives products (Chaudhary & Abbas, 2017). In contrast, global corporate firms faced considerable losses due to their imprudent derivatives exposure (Kim, Papanastassiou & Nguyen, 2017). On the other hand, the incidence of potential losses has been minimized by the prudent use of derivatives products (SBP, 2008). There is an increasing trend in the usage of financial derivatives by the firms in Pakistan (Naz, 2011).

It is also the potential of usage of financial derivatives to take the advantage of price discovery, liquidity and to transfer the risks among the participants. The Pakistan Mercantile Exchange (PME) was established by the proposed plan of Securities and Exchange Commission of Pakistan (SECP) to make sure the risk management practices and to set the grounds for the increment in the usage of financial derivatives (SECP, 2006).

Thus, SMEs in Pakistan are considering the significance of the usage of financial derivatives for the performance of their business. Even prudent regulations are not formulated by the SECP, SBP, PSX and PMEX, which provide the huge opportunity to the SMEs to engage themselves in the usage of financial derivatives (Ehsan, 2012). The Head of international relations and investor education department in SECP (Ms. Khalida Habib, 2017) while giving the answer to the researcher of this study about the increasing trend of financial derivatives by medium size firms and users of financial derivatives said that:

> "*There are very small numbers of listed companies in Pakistan but there are thousands of medium size companies, which have big investments and organizational structure. These medium size firms are using financial derivatives and this trend is increasing with the increasing trend of skills of top management and awareness of financial derivatives. It is little bit difficult to find these firms because we do not have regulations of financial derivatives for these firms and these firms do not show their derivatives volume in their balance sheet and they have off balance sheet record. Second important point, which is notable, PMEX is providing big platform to these firms for the derivatives' usage but there is an issue of intermediation of brokers. The third point is that if you see in the world, the number of over the counter derivatives usage almost in hundreds of trillion dollars but the usage of financial derivatives by exchanges is not more than 30 trillion dollar. So, majority firms involved in derivatives in the world use over the counter derivatives, which are off balance sheet derivatives. The PMEX cannot provide the list of firms because these medium size firms use brokers and their intermediary for their derivative contracts. According to my knowledge and information the brokers can provide you the specific information regarding the names of the companies, which are using financial derivatives*".

Therefore, it is necessary for the SMEs to really understand the determinants of the usage of the financial derivatives, which motivate them to increase their performance. Ultimately, these strategies will propel the SMEs performance ahead. The list of non-listed medium size companies, which are directly or indirectly involved with the financial derivatives' usage is provided by the SECP as shown in table 1.5.

Table 1.5

Financial derivatives' Users (medium size firms) in Pakistan 2017

No.	Activity	Medium size companies involved in financial derivatives in manufacturing sector	%	Medium size companies involved in financial derivatives in services sector	%	Total
1	Import	980	29.03%	321	35.46%	1301
2	Export	2396	70.97%	584	64.54%	2980
	Total	**3376**	**100%**	**905**	**100%**	**4281**

Source: developed for this research based on Securities and Exchange Commission of Pakistan (SECP) list 2017.

Out of total 3376 medium size manufacturing firms, 29% are import firms and 71% are export firms. In addition, out of total 905 medium size services firms, 35% firms are import and 65% are export firms. Therefore, four thousand two hundred and eighty one (4281) medium size firms are involved in the financial derivatives and it is well justified to conduct the research about the usage of the financial derivatives within SME businesses in Pakistan.

Gap in the existing literature. In addition to the increasing trend of the usage of financial derivatives as discussed above, very limited numbers of studies have been conducted in Pakistan regarding financial derivatives. Even a single study has not been conducted on the usage of financial derivatives by SMEs in Pakistan, which motivates this research. Many studies (Aabo, Hog & Kuhn, 2010; Aabo, Hansen & Muradoglu, 2015; Brunzell, Hansson & Liljeblom, 2011; Bua, Gonzalez, Lopez & Santomil, 2013; Capstaff & Marshall, 2005; Clark & Judge, 2008; Davies, Eckberg & Marshall, 2006; Gonzalez, Bua, Lopez & Santomil, 2010; Hagelin, 2007; Jankensgard, 2015; Khediri, 2010; Khediri & Folus, 2010; Klimezak, 2008; Marshall, Cardon, Poddar & Fontenot, 2013; Mefteh-wali, Boubaker & Labegorre, 2012; Nguyen, Hoa & Faff, 2007; Panaretou, Shackleton & Taylor, 2013; Sang, Thien, Karamah & Osman, 2013; Spano, 2007; Sprcic, 2013; Sprcic & Sevic, 2012; Judge, 2006; Aretz, Bartram & Dufey, 2007; Dhanani, Fifield, Helliar & Stevenson, 2007) on the usage of financial derivatives have been conducted in Europe.

Following studies such as Carter, Rogers, Simkinsm and Treanor (2017), Ghosh (2017), Alsubaie (2009), Brown, Gregory, Crabb and Haushalter (2006), Campello, Lin, Ma and Zou (2011), Simkins, Carter, Rogers and Treanor (2016), Chernenko and Faulkender (2011), Choi, Mao and Upadhyay (2013), Dadalt, Lin and Lin (2012), Dionne and Triki (2013), Dolde and Mishra (2007), Fauver and Naranjo (2010), Gay, Lin and Smith (2011), Geczy, Minton and Schrand (2006), Huang, Ryan and Wiggins (2007), Jin and Jorion (2006), Kim, Mathur and Nam (2006), Lin and Lin (2012), Lin, Pantzalis and Park (2007), Lin, Phillips and Smith(2008), Lin, Pantzalis and Park(2009), Lin, Fang and Cheng (2010), Magee (2013), Marami and Dubois (2013), Naito and Laux (2011), Perez-Gonzalez and Yun (2013), Samitas, Tsakalos and Eriotis (2011), Wang and Fan (2011), Raturi (2005) were conducted in American region.

Some studies in Asia and Australia regions have also been conducted. The studies including Kim, Papanastassiou and Nguyen (2017), Alam, afza and Bodla (2013), Chiang and Lin (2007), Hu and Wang (2006), Shu and Chen (2003), Velasco (2014), Wang, Li, Zhou (2010), Ahamad and Haris (2012), Chong, Chang and Tan (2014), Jia and Chen (2009), Ehrlich, Woodward and Tiong (2012), Baofeng (2009), Marsden and Prevost (2005), Srinivasan, Srinivasan and Deo (2009), Afsal and Mallikarjunapp (2007), Bae and Park (2004), Mishra and Rajeev (2014), Vasumathy (2015) have been conducted in Asia. Moreover, the studies such as Berkman, Bradbury, Hancock and Innes (2002), Brailsford, Heaney and Oliver (2005), Heany and Winata (2005), Nguyen and Faff (2002), Yip and Nguyen (2012), Yong, Faff and Nguyen (2011) and Huang and Li (2014) have been conducted in Australian region.

On the other hand, a few studies have been conducted in Pakistan on financial derivatives such as Sajjad, Noreen and Zaman (2013), Awan and Rafique (2013), Khan, Shah and Abbas (2011), Khan and Hijazi (2009), Afza and Alam (2011a; 2011b), Chaudhry, Mehmood and Mehmood (2014) and Khan (2006). All these studies were conducted on large size firms. Very few studies including Kula (2005), Pennings and Garcia (2004), Bank and Weisner (2012), Hrubosoa and Kamenikova (2007), Fantini (2014), Mihai-Yiannaki (2013), Chong, Chang and Tan (2013), Ehrlich, Woodward and Tiong (2012) and Cowan, Micco and Yanez (2006) were conducted on SMEs around the world.

All the studies as stated above were conducted on financial derivatives and their usage. Therefore, there is very little literature on financial derivatives in Pakistan and no study has been conducted on the usage of financial derivatives on SMEs. The purpose to conduct this study was due to major issues that SMEs were facing. The major issues such as volatility in exchange rate in Pakistan due to political instability, depreciation of Pakistan currency, the new bilateral agreements with China, Iran, Afghanistan and other countries to enhance export. Moreover, the new project of Chine Pakistan Economic Corridor (CPEC) between China and Pakistan and financial constraints faced by SMEs also justify the importance of this research.

Thus, this research is timely and significant according to the current economic situation of Pakistan when Pakistan currency is very volatile in last ten years. Therefore, this research contributes significantly to the existing body of knowledge which justified the research problem.

1.4 Research Issues

The previous section justified this research. This section formulates the research issues after the discussion of a research problem in order to represent the research problem in a more peculiar way. The summary of the formation process of research issues is illustrated in the figure 1.6 and detailed explanations are presented in section 2.11 of chapter 2.

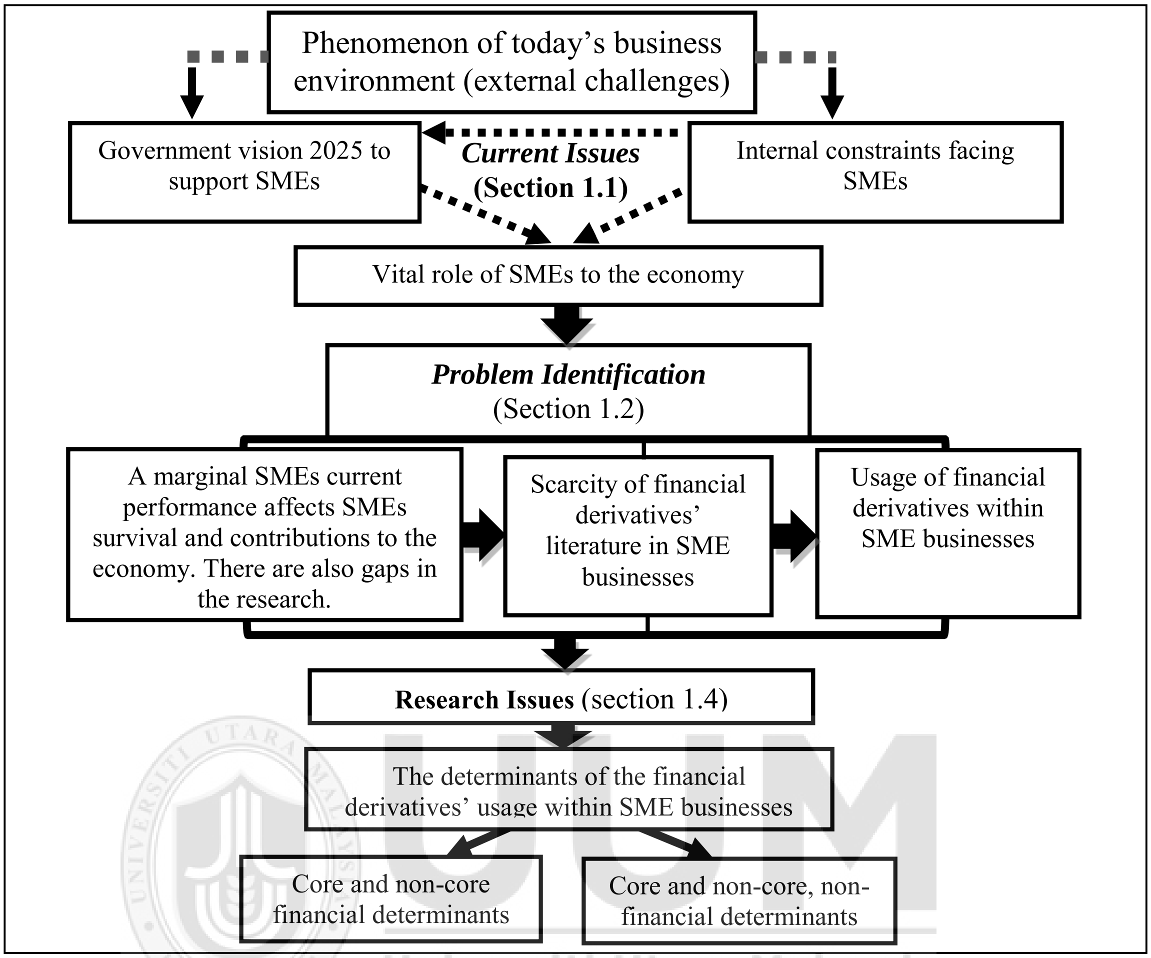


Figure 1.6
Formation Process of Research Issues

Source: developed for this research

Five research issues proposed for this research are investigated using the preliminary theoretical framework, hence providing a platform for data collection and data analysis. Subsequently, research findings provide answers following the identification of research problem. The first research issue is centred on the determinants for the SME businesses in Pakistan to use financial derivatives. This research issue is formulated to investigate for overlapping to get the overall or bigger picture of the phenomenon.

Research Issue 1. What are the determinants for the SME businesses in Pakistan to use financial derivatives?

The following four research issues are actually guided or leaded by the main first research issue. The second research issue concentrates on the core financial determinants for the SME businesses in Pakistan to use financial derivatives.

Research Issue 2. What are the core financial determinants for the SME businesses in Pakistan to use financial derivatives?

The third research issue within the preliminary theoretical framework focuses on the non-core financial determinants for the SME businesses in Pakistan to use financial derivatives.

Research Issue 3. What are the non-core financial determinants for the SME businesses in Pakistan to use financial derivatives?

The fourth research issue concentrates on the core non-financial determinants for the SME businesses in Pakistan to use financial derivatives.

Research Issue 4. What are the core non-financial determinants for the SME businesses in Pakistan to use financial derivatives?

The fifth research issue is centred on the non-core, non-financial determinants for the SME businesses in Pakistan to use financial derivatives.

Research Issue 5. What are the non-core, non-financial determinants for the SME businesses in Pakistan to use financial derivatives?

In short, the formation process of the five research issues identified in this research were influenced by the literature review in chapter 2 and were investigated within the preliminary theoretical framework of this research discussed in the section 2.10 of chapter 2. Therefore, these five research issues are analyzed in both stages of data collection and data analysis and are answered in findings and discussions chapters.

1.5 Research Objectives

The previous section provided research questions of this research. The current section explains the objectives of this research. This research is exploratory in nature, the fundamental aim of this research is to investigate and discover the determinants of the usage of the financial derivatives within SME businesses in Pakistan and propose a preliminary theoretical framework for this research. Five particular objectives support the purpose of this research. The first research objective is about to investigate for overlapping to get the overall or bigger picture of the phenomenon and the following four objectives are leaded by the first research objectives.

1. to investigate the determinants for the SME businesses in Pakistan to use financial derivatives
2. to investigate the core financial determinants for the SME businesses in Pakistan to use financial derivatives
3. to investigate the non-core financial determinants for the SME businesses in Pakistan to use financial derivatives

4. to investigate the core non-financial determinants for the SME businesses in Pakistan to use financial derivatives
5. to investigate the non-core, non-financial determinants for the SME businesses in Pakistan to use financial derivatives

1.6 Scope of the Research

The previous section discussed the research objectives. The current section explains the scope of this research. The main focus of this research is based on three aspects. Firstly, all the SME businesses registered in Securities and Exchange Commission of Pakistan (SECP) and Small and Medium Enterprises Development Authority (SMEDA) and these SMEs are operating in Pakistan are included in this research. Secondly, all the manufacturing firms, which are engaged with export, are focused in this research. Why manufacturing firms? The manufacturing sector is selected for this study because of its large impact on the economy (Imran, Aziz & Hamid, 2017).Why exporting firms? Because 85% exports are relying on manufacturing sector and exporting firms suffer from financial risk due to uncertainty and high volatility related to prices in international markets (Khan & Khalique, 2014). In that way, exporting firms can be affected by financial indicators such as foreign exchange rate and interest rate. The currency and interest rate fluctuations have impact on solvency and liquidity of industrial firms (Li, Ma& Xu, 2015).

Therefore, the financial risk management brings up vital solutions for exporting firms in shape of financial derivatives' usage. Pakistan is not a developed economy, therefore, its economic environment is not stable, which generates risk for the exporting firms (Imran, Hamid & Aziz, 2018). A study in Turkey found that exporting firms mainly use currency derivatives products. Especially they select the products of currency derivatives such as currency options, currency swaps, currency forwards and foreign exchange future contracts. Further, surveys resulted that exporting firms usually use financial risk management tools for hedging, especially foreign exchange risk is the most important risk in terms of exporting firms (Yilderan, 2015; Li, Ma & Xu, 2015). In addition to Turkey, a study in Brazil also found that import and export related firms use speculation and hedging strategies for their foreign exchange exposure (Oliveira, 2012).

Thirdly, in addition to manufacturing and export firms, the number of employees and sales turnover, which contribute to the definition of SME businesses are also the focus of this study. All the SMEs used in this study are comprised of full time employees not exceeding 250 and annual sales turnover of not more than PKR 800 Million that is constant and is in accordance with the limit set by the SBP and SMEDA.

1.7 Operational Definitions

The previous section discussed the scope of this research. This section summarizes the operational definitions of different terms used in this research as shown in table 1.6.

Table 1.6
Summary of Operational Definitions

<table>
<tr><th>No</th><th>Terms</th><th>Definition used for this research</th><th>Referred to in this thesis</th></tr>
<tr><td>1</td><td>Financial derivatives</td><td>Ten attributes of financial derivatives are implicitly explained which comprise of financial instruments, value driven, underlying asset, an agreement, redistribution of risk, notional value, counterparties involvement, delivery in future date, secondary market instrument and no intrinsic value are synthesised to formulate a comprehensive new definition of financial derivatives used for this research.</td><td>section 2.2, chapter 2</td></tr>
<tr><td>2</td><td>SMEs</td><td>The definition of SMEs is formulated from the synthesisation of Asian countries SMEs' definitions and Pakistan own institutions definitions of SMEs. Two main measurements namely sales turnover and number of employees are used as base for the definition of SMEs in Pakistan for this research.
<table>
<tr><th>Medium Size</th><th>Employees</th><th>Sales turnover</th></tr>
<tr><td>Manufacturing sector</td><td>Full time employees 51-250</td><td>Annual sales turnover PKR 150-800 million</td></tr>
<tr><td>Service Sector</td><td>Full time employee 51-100</td><td>Annual sales turnover PKR 150-800</td></tr>
</table></td><td>section 2.5, chapter 2</td></tr>
<tr><td>3</td><td>Scientific paradigm</td><td>The definition of scientific paradigm is produced based on the synthesisation of definitions of scientific paradigms by four authors. This definition is produced to select the appropriate research paradigm to be sued for this research.</td><td>section 3.1, chapter 3</td></tr>
</table>

Source: developed for this research

1.8 Organization of the Dissertation

This dissertation is structured and designed in five main chapters as shown in figure 1.7. Chapter one presents the objective and brief overview of financial derivatives and its impact on the SME businesses in Pakistan. Research problem, justification of research, research issues, research objectives, scope of the research and operational definitions are the main outcomes of chapter 1. The past literature relevant to the usage of financial derivatives in large firms and small firms are focused in chapter 2. Chapter 2 covers the definitions of financial derivatives, types of financial derivatives and definitions of SMEs. The determinants of the usage of the financial derivatives in large as well as small firms and the related theories are analyzed in chapter 2. The important outcomes of chapter 2 include definitions of financial derivatives, definitions of SMEs, determinants of the usage of financial derivatives, underlying theories and preliminary theoretical framework. The methodology of how this research carried out is described in chapter 3. The methodology explained the research paradigms used in this research, qualitative research as research approach is used in this research with convergent interviews along with their data collection and data analysis techniques. The outcomes of chapter 3 include research methodologies, sampling process, interviewing and data analysis techniques. The subsequent chapter 4 discussed the findings of this research. It began with the research setting, data analysis process and finally each research issue is thoroughly addressed. The final chapter 5 provided conclusion to each research issue raised in chapter 2 and embedded into the literature. Conclusions are also drawn about the research problem and the contributions made towards the methodology, theory, practice and policy. Lastly, the directions for future research are briefly discussed.

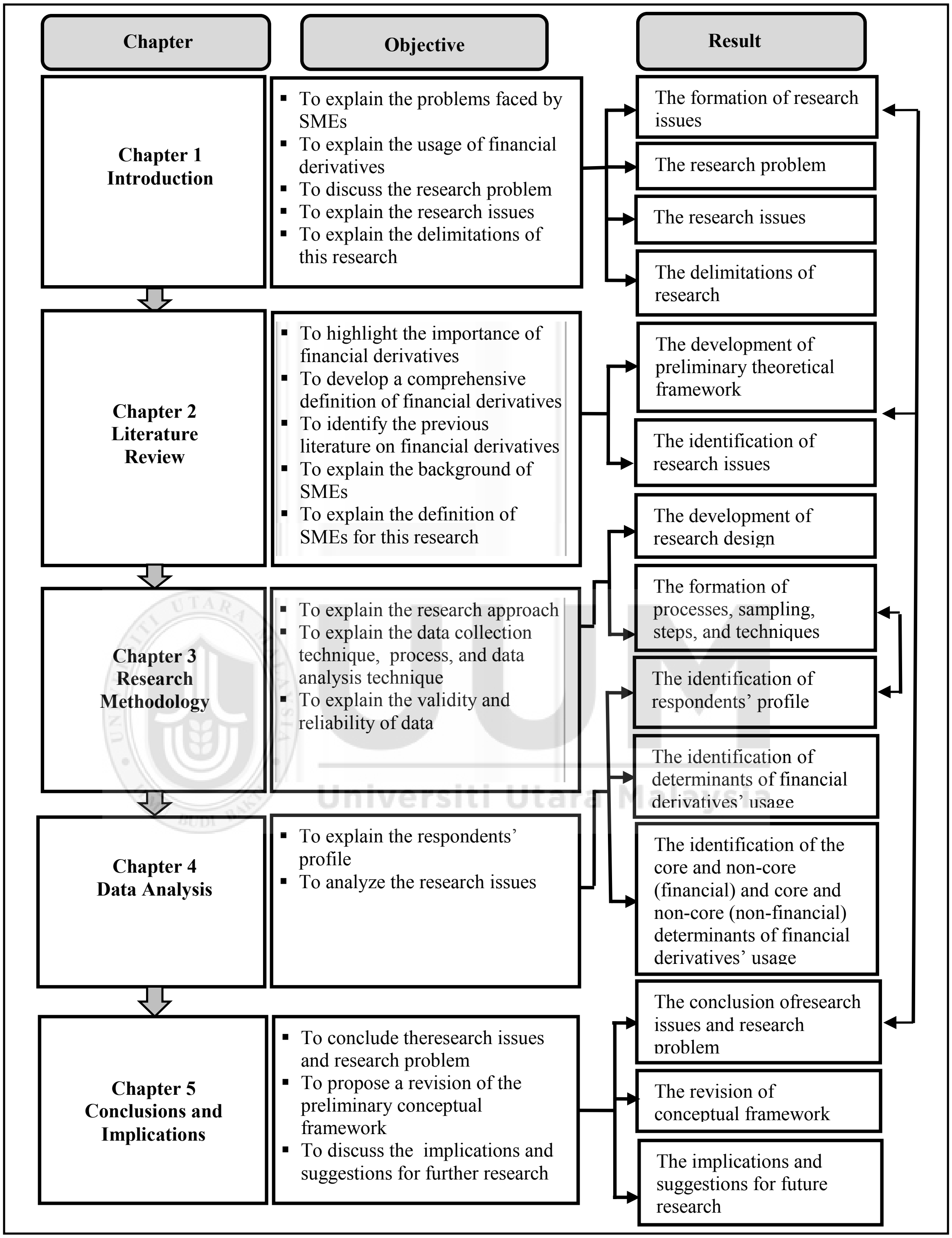


Figure 1.7
Structure of This Research Dissertation

Source: developed based on Rashid (2017)

1.9 Summary

The overall organization of research dissertation is explained in previous section 1.9. This section summarizes the whole chapter one. In summary, this chapter discussed the background of the research. The international finance, evolution of financial derivatives and their importance has been explained. The research problem has also been discussed in this chapter followed by the justification of research problem. The research issues and research objectives have been explained to make sure their alignment. Next, the operational definitions used in this research along with its scope have been discussed. At the end of this chapter, the structure of research dissertation is provided. Therefore, this chapter 1 outlines the full details of how the research is carried out with the goal to find the answers to the research issues presented.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

Chapter 1 provided the introduction of this research. On the other hand, the purpose of this chapter 2 is to discuss the past literature in order to point out the problems which are foundation of this research. This chapter is comprised of thirteen different sections that are summarized in figure 2.1.

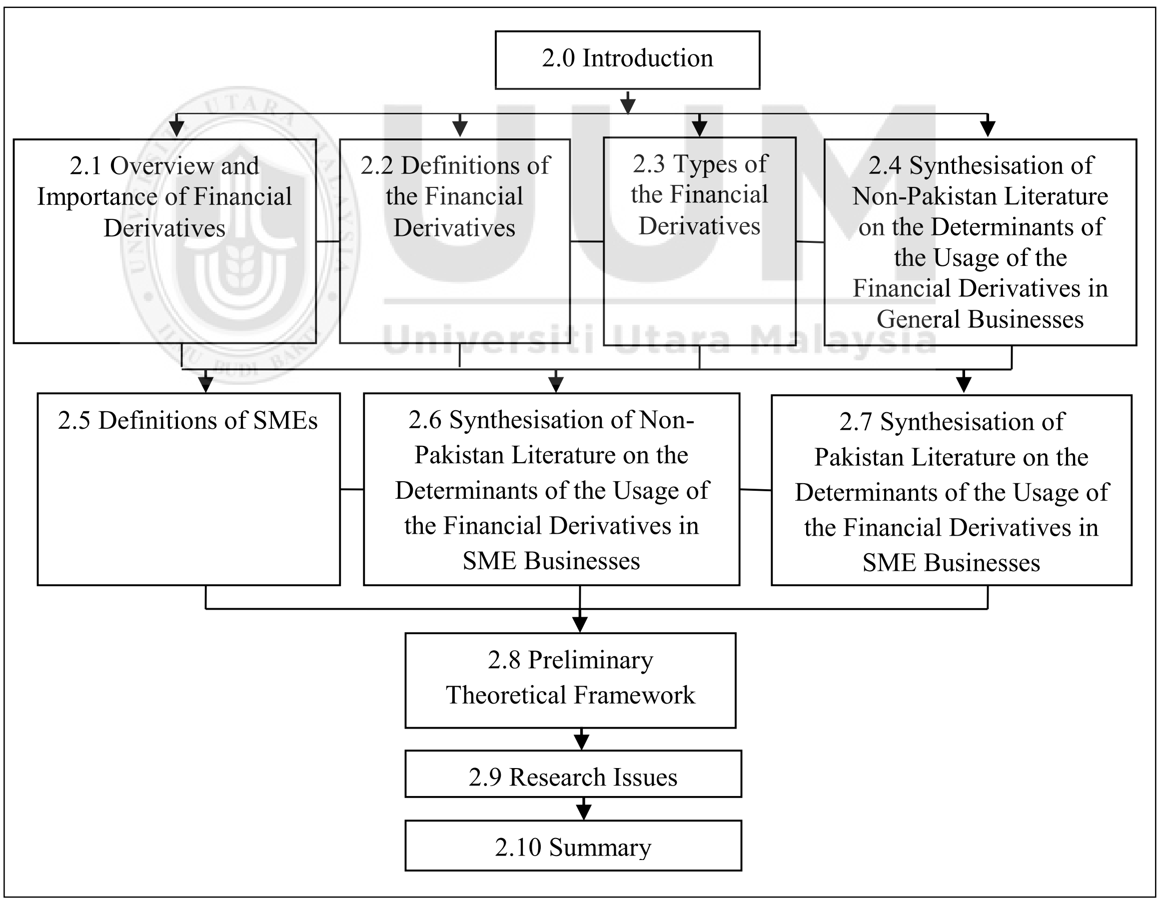


Figure 2.1
The organization of chapter two, interconnections and section numbers

Source: developed for this research

Section 2.1 discusses about the overview of financial derivatives and definitions of financial derivatives are explained in section 2.2. Similarly, section 2.3 discusses different types of financial derivatives and synthesisation of non-Pakistan literature in any businesses is explained in section 2.4. The definitions of SMEs and synthesisation of non-Pakistan literature in SME businesses are discussed in section 2.5 and 2.6 respectively. Section 2.7 discusses about the synthesisation of Pakistan related literature based on the synthesisation of past literature, the preliminary theoretical framework is extracted for this research that is delivered in section 2.8. The research issues regarding this research based on the preliminary theoretical framework are discussed in section 2.9. Section 2.10 is the last section that sum ups this chapter 2.

2.1. Overview and Importance of Financial Derivatives

The first section was an introductory section, which provided the background of the chapter and its overall organization. This section discusses the overview of financial derivatives and their importance. It is necessary to understand the financial derivatives first, which is the basic to this study. The demand of financial derivatives has been increased since last two decades in order to overcome the risks faced by firms. The risk of price fluctuations of assets runs around an investor who owns financial assets such as foreign exchanges, shares, loans and bonds and market forces to protect himself from such type of risks (Gupta, 2006).

Financial market is still imperfect in the real world and cash flows of firms can be influenced by using financial derivatives. In this globalized competitive era, the building blocks of modern finance are derivatives (Bhalla, 2007). Modern financial theory can be considered important to understand the risk management. Derivatives are the contracts, which are also used for the facilitation of trading of financial assets. The standardized derivatives are used in derivatives exchanges around the globe (Gupta, 2006). Derivatives are very complex financial instruments but the investors' portfolio can be leveraged by these instruments. Derivatives are explosive instruments; therefore, investors make sure to be mindful when purchasing these instruments. Derivatives are valuable for investors' investment portfolio if they have right strategy (Bacha, 1999).

The importance of financial derivatives cannot be ignored due to globalized competitive environment (LiPuma & Lee, 2004). Businesses always remain in suspense due to the risk of fluctuations in their prices of commodities. Financial derivatives handle the exposure of such risk that comes from the drastic changes in the prices of financial assets. Firms and investors can customize their portfolio risk characteristics by using financial derivatives. Financial derivatives are cost efficient because these instruments help financially in the supply requirements of manufacturers by selling in advance the commodity that they own (Pandian, 2009).

Financial derivatives are considered indicators of future prices' trends, which are possible to triumph in particular period. The future prices of underlying assets are anticipated by the derivatives' markets (Bryan & Rafferty, 2006). Such price anticipation play vital role in the allocation of financial resources. Financial derivatives are also important for hedgers, speculators and arbitrageurs because they do not need to pay full amount of contract today as such contracts work on margin trading. They decrease the transaction cost and increase the liquidity of contractual assets (Gupta 2006).

Financial derivatives are used to mitigate the counter party risk. Derivatives are purchased from open market by the investors in order to exercise their right. And it is not an obligation for the investors to exercise their right. Investors are flexible in formulating their investment policy while using financial derivatives (Saunders & Cornett, 2007).

The usage of financial derivatives makes managers, investors and traders able to achieve their financial goals and allocate their financial assets appropriately. The trading of financial derivatives minimizes the price volatility, assimilates the prices of underlying assets and grasps the price spread as well. These also eradicate the things such as dearth and overabundance in the marketplaces. Competitive trading took place due to the emergence of financial derivatives in the markets.

In short, the importance of financial derivatives increased due to the existence of imperfect financial markets, globalized competitive markets, anticipation of future prices of underlying assets. Therefore, these financial derivatives are used to moderate the counter party risks to achieve financial goals.

2.2 Definition of Financial Derivatives

The previous section discussed the overview of financial derivatives. Now, this section explains the definition of key issue used in this research. On the foundation of past literature, the quantity of definitions of financial derivatives is very limited. Therefore, this study leverages the definitions of financial derivatives as reference to get the definition of financial derivatives. After reviewing the existing literature, ten (10) main attributes of financial derivatives have been extracted from thirteen (13) selected articles as shown in table 2.1.

Table 2.1
Summary of Main Attributes Employed to Define the Financial Derivatives by Many Researchers

		Researchers														
The Attributes or Components of the Definition of Financial Derivatives		Fadun, 2013	Sajjad et al., 2013	Hull, 2012	Vashishta & Kumar, 2010	Kapitshinas, 2008	Kevin, 2015	Gupta, 2006	Yadav et al., 2000	Pandian, 2009	Chance, 2003	Kolb & Overdahl, 2003	FASB (ASC), 2015)	Triantis, 2000	**Frequency**	Used for this research
1	Financial Instrument	✓	×	✓	×	✓	×	×	×	×	✓	✓	✓	✓	**7**	✓
2	Value Driven	✓	✓	✓	✓	×	×	✓	✓	✓	×	✓	×	✓	**9**	✓
3	Market variable/Underlying Asset	✓	✓	✓	✓	×	×	×	×	✓	✓	✓	✓	✓	**9**	✓
4	Contract/Agreement	×	✓	×	✓	×	×	✓	✓	✓	×	✓	✓	×	**7**	✓
5	Redistribution of risk	×	✓	×	×	×	✓	×	✓	✓	×	×	×	×	**4**	✓
6	Notional value	×	✓	×	×	✓	×	×	✓	×	×	×	✓	✓	**5**	✓
7	Counterparties involvement	×	✓	×	×	×	×	×	×	×	×	×	×	×	**1**	✓
8	Delivery in future date	×	×	×	×	×	×	✓	✓	×	×	×	✓	×	**3**	✓
9	Secondary Market Instrument	×	×	×	×	×	×	✓	✓	×	×	×	×	×	**2**	✓
10	No intrinsic value	✓	×	×	×	×	×	×	×	✓	×	×	×	×	**2**	✓

Source: developed for this research

The analysis of related literature on financial derivatives had been carried out based on three criteria: (i) the year of publication (from the year 2000 and onward) (ii) the refereed journal status, such as journals published in ISI, Scopus and Impact Factor Journals found on databases such as Proquest Direct, Emerald Management Plus, EBSCOhost, and Jstore Art & Science (iii) category of literature, namely academic literature.

The first and foremost attribute of the definition of financial derivatives is *financial instrument* as shown in table 2.1. Financial instruments are monetary agreements or contracts in shape of a piece of paper that do not have any worth alone, but these instruments take value from the claim that these have given to their owners (Chance, 2003). These financial instruments are formulated, traded, customized and settled in derivative exchanges and over the counter markets (Hull, 2012). These instruments are used for hedging as well as for speculation purposes to mitigate the risk of contracting parties (Fadun, 2013; Kolb & Overdahl, 2003; FASB ASC, 2015; Triantis, 2000). This attribute has been extracted from six (6) articles as synthesised in the table 2.1 (row 1, column frequency). Therefore, this attribute is taken to be used in the definition of financial derivatives for this research.

The second attribute incorporated in the definition of financial derivatives is the *value driven.* Value driven means, it derives its value from the underlying assets such as stocks, bonds, certificates and so on. When parties get involved in a derivative transaction, these derive the benefit of risk mitigation by using the assets. The assets are exchanged against the cash at their maturity (Fadun, 2013; Sajjad, Noreen & Zaman, 2013; Hull, 2012; Vashishta & Kumar, 2010; Gupta, 2006; Triantis, 2000; Pandian, 2009; Kolb & Overdahl, 2003 and Yadav, Jain & Peyrard, 2000). This element is very prominent that has been quoted by nine (9) authors as shown in table 2.1 (row 2, column frequency). Hence, this element is taken to be used in the definition of financial derivatives for this research.

Underlying asset or market variable is the third attribute that is included in the definition of financial derivatives. The values of financial derivatives depend upon the underlying assets. An underlying asset may be a financial asset or a commodity. These underlying assets include currencies or foreign exchange rates, bonds (including negotiable debt securities), T-bills, share warrants, shares of companies, loans, deposits (over the counter money markets products), metals (include silver and gold) and commodities (Orange, grain and coffee beans) (FASB (ASC), 2015; Fadun, 2013; Sajjad et al., 2013; Vashishta & Kumar, 2010; Hull, 2012; Kolb & Overdahl, 2003; Chance, 2003;Pandian, 2009 and Triantis, 2000). This attribute has been quoted by nine (9) authors from the thirteen (13) selected articles synthesised in table 2.1(row 3, column frequency). Therefore, this attribute is taken to be used in financial derivatives' definition for this research.

The fourth attribute of financial derivative's definition is *an agreement or a contract*. Financial derivative is an agreement or a contract which takes place between two parties, if it is not an agreement or contract, it does not have any legal value. It becomes only possible to trade in the derivative exchanges and over the counter markets when it meets all the conditions of an agreement or a contract. If anyone of the parties deviates from the predefined conditions included in the agreement or contract with mutual consent, it would be liable to other party. Many researchers included this variable in their definition of financial derivatives (Sajjad et al., 2013; Vashishta & Kumar, 2010; Kolb & Overdahl, 2003; Gupta, 2006; Yadav et al., 2000; FASB (ASC), 2015 and Pandian, 2009). Seven (7) authors out of thirteen (13) selected articles in the synthesised table 2.1(row 4, column frequency), quoted this element in the definition of financial derivatives. Therefore, this attribute is taken to be used in the definition of financial derivatives for this research.

Redistribution of Risk is the fifth component of definition of financial derivatives. The main rationale of derivative contracts is to shift their own risk, which may happen in future. The firm profit can be increased by redistribution of risk. When an investor makes derivative agreements, its main focus is to reduce its own risk to save itself from expected future loss or bankruptcy (Sajjad et al., 2013; Kevin, 2015; Yadav et al., 2000 and Pandian, 2009). From the synthesisation, table 2.1 (row 5, column frequency), four (4) authors out of thirteen (13) selected articles quoted this component. Thus, this attribute is taken to be included in the definition of financial derivatives for this research.

The sixth attribute of definition of financial derivatives is *notional value.* The notional value is the outstanding spot price of the derivative contract. It is also called as notional principal amount or theoretical value which is paid by the buyer on the maturity of contract. Notional value is the product of number of units in a contract and their spot price (Sajjad et al., 2013; Kapitshinas, 2008; Yadav et al., 2000; FASB (ASC), 2015; Triantis, 2000). This element has been quoted by five (5) authors from the synthesisation table 2.1 (row6, column frequency). Hence, due to the importance of this element, it is taken to be used in the definition of financial derivatives for this research.

Counterparties' involvement is the seventh component of definition of financial derivatives. First of all, it is necessary to explain that an agreement or a contract cannot take place without the involvement of at least two parties. Therefore, in financial derivatives' contract two or more than two parties are involved to make a financial derivative contract. One party is buyer and other party is seller of the underlying asset (Sajjad et al., 2013). This attribute has been quoted by only one author as shown in the synthesised table 2.1 (row 7, column frequency) out of thirteen (13) selected articles. Therefore, this attribute is vital and included in the definition of financial derivatives for this research.

Some researchers included *delivery in future date* as an attribute of definition of financial derivatives (Yadav et al., 2006; Gupta, 2000 and FASB ASC, 2015). Researchers asserted that a financial derivative is an agreement, which matures in some future date. If some commodities or certificates are to be exchanged based on the derivative contract, then such contracts will be matured in predetermined future date. Only three (3) authors used this element out of thirteen (13) selected articlessynthesised in table 2.1 (row 8, column frequency). Consequently, this attribute is taken to be used in the definition of financial derivatives for this research.

The ninth attribute of definition of financial derivative is *secondary market instrument*, which has been shown in synthesised table 2.1 (row 9, column frequency). Financial derivatives are considered as secondary market instruments and these can be used in fresh capital mobilization in the competitive corporate world. These are called as secondary market instruments because these are previously issued and now bought and sold among the parties. The secondary markets are very liquid and investors' preference is meshed for liquidity (Yadav et al., 2000 and Gupta, 2006). Therefore, this element is imperative and taken to be included in the definition of financial derivatives for this research.

The last attribute of definition of financial derivatives is *no intrinsic value*. Fadun, (2013) and Pandian (2009) included this component as the part of definition of financial derivatives. The financial derivatives have no intrinsic value because these derivatives take their perceived value from other assets. If an instrument has intrinsic value, it means that instrument is not financial derivative. The apparent value of financial derivative is taken from underlying asset, therefore, financial derivatives are intrinsically worthless. From the synthesised table 2.1 (last row, column frequency), out of thirteen (13) selected articles, two (2) authors quoted this attribute in the definition of financial derivatives. Thus, based on the significance of this element, it is included in the construction of definition of financial derivatives for this research.

In conclusion, all the ten (10) attributes described above are used in the formulation of the new definition of financial derivatives for this research. Consequently, the above described information is synthesised to develop comprehensive definition of financial derivatives used for this research as follows:

"*All contractual financial instruments, having notional value but no intrinsic value and involving counterparties, derive their value from underlying assets/market variables,* *which are traded in secondary market, having delivery in some future date, for the redistribution of risk are called financial derivatives."*

2.3 Types of Financial Derivatives

The previous section discussed the definition of financial derivatives that is used for this research. This section describes the most common types of financial derivatives. A lot of intricate kinds of financial derivatives are being exercised widely around the globe. Therefore, this research confines itself to be widely used and the most common exercised kinds of financial derivatives available to the traders and investors in the world's financial markets. The types of financial derivatives have been discussed by fourteen (14) selected articles.

The analysis of related literature on types of financial derivatives had been carried out based on four criteria: (i) the year of publication (from the year 2005 and onward) (ii) the refereed journal status, such as journals published in ISI, Scopus and Impact Factor Journals found on databases such as Proquest Direct, Emerald Management Plus, EBSCOhost, and Jstore Art & Science (iii) category of literature, namely academic (iv) fit to the definition of financial derivatives as discussed in section 2.1. All the fourteen (14) selected articles are shown in table 2.2.

Table 2.2
Summary of Types of Financial Derivatives Used by Different Researchers

	Types of Financial Derivatives	Fadun, 2013	Sajjad et al., 2013	Kumari, 2011	Nirmal Kumar & Balaji,	Vashishta & Kumar, 2010	Debasish; 2010	Ehsan, 2017	Apte, 2007	Hull, 2017	Saunders & Cornett, 2007	Kevin, 2015	Gupta, 2006	Hull, 2005	Smullen & Hand , 2005	**Frequency**	Used for this research
1	**Forward Contracts**	✓	✓	×	×	✓	×	✓	×	✓	✓	✓	✓	✓	×	**9**	✓
a	Forward Rate Agreements	×	×	×	×	×	×	×	✓	×	✓	×	✓	×	×	**3**	✓
b	Foreign Currency Forwards	×	×	×	×	×	×	×	×	×	✓	×	✓	×	×	**2**	✓
2	**Future Contracts**	✓	✓	✓	✓	✓	✓	✓	×	✓	✓	✓	✓	×	×	**11**	✓
a	Interest Rate Futures	✓	✓	×	×	✓	×	×	×	×	✓	×	✓	×	×	**5**	✓
b	Foreign Currency Futures	✓	✓	×	×	✓	×	×	×	✓	✓	×	✓	×	×	**6**	✓
c	Stock Index Futures	×	✓	×	×	✓	×	×	×	×	✓	×	✓	×	×	**4**	✓
d	Bond Index Futures	×	✓	×	×	✓	×	×	×	×	✓	×	✓	×	×	**4**	✓
e	Cost of Living Index Futures	×	×	×	×	×	×	×	×	×	✓	×	✓	×	×	**2**	✓
3	**Options**	✓	✓	✓	✓	✓	×	✓	✓	✓	✓	×	✓	✓	✓	**12**	✓
a	Call Options	✓	✓	✓	✓	✓	×	✓	✓	✓	✓	×	✓	×	×	**10**	✓
b	Put Options	✓	✓	✓	✓	✓	×	✓	✓	✓	✓	×	✓	×	×	**10**	✓
c	Foreign Currency Options	×	×	×	×	×	×	×	×	✓	✓	×	✓	✓	✓	**5**	✓
d	Interest Rate Options	×	×	×	×	×	×	×	✓	✓	✓	×	✓	×	✓	**5**	✓
4	**Swaps**	✓	✓	✓	×	✓	×	×	×	✓	✓	×	✓	×	×	**7**	✓
a	Interest Rate Swaps	✓	✓	✓	×	✓	×	×	✓	×	✓	×	✓	×	×	**7**	✓
b	Currency Swaps	✓	✓	✓	×	✓	×	×	✓	✓	✓	×	✓	×	✓	**8**	✓
c	Credit Default Swaps	×	×	×	×	×	×	×	×	✓	✓	×	✓	×	×	**3**	✓
d	Total Return Swaps	×	×	×	×	×	×	×	×	✓	×	×	✓	×	×	**2**	✓
e	Swaption	×	×	×	×	×	×	✓	×	✓	×	×	×	×	×	**2**	✓

Source: developed for this research

The first main type of financial derivatives is *forward contracts* (row 1, in table 2.2). These are the most common, customized and simple type of financial derivatives' instruments (Gupta, 2006). It has been described by the researchers that forward contracts guard the predetermined price from the fluctuations of prices in future (Hull, 2017; Saunders &

Cornett, 2007). It is important to mention that forward contracts are made for the forward delivery instead of cash immediate or spot delivery (Micheal, 2008; Hull, 2005). On the other hand, the financial instruments and foreign currencies are also part of forward contracts today (Vashishta &Kumar, 2010). The foundation of forward contracts permits it to be used as speculative instrument because buyer and seller make gains from the future price anticipation (Kevin, 2015).

Forward contracts are also used to reduce volatility in definite market (Sajjad et al., 2013; Fadun, 2013). Nine (9) authors quoted forward contracts as main type of financial derivatives out of fourteen (14) selected articles in synthesised table 2.2 (row1, column frequency). Therefore, it is taken to be used as a main type of financial derivatives for this research. There are two components of forward contracts as discussed in table 2.2.

The first component of forward contracts is forward rate agreement (FRA). It is a bilateral and over the counter contract, which decides the currency exchange rate or interest rate (Apte, 2007). FRA saves the parties involved in the contract by potential fluctuations in the interest rate (Saunders and Cornett (2007). The uncertainty regarding return on investment or borrowing cost is removed by FRA (Gupta, 2006). FRA has been quoted by three (3) researchers out of fourteen (14) selected articles for this research as synthesized in table 2.2 (row 2, column frequency). Therefore, this type of forward contract is considered important and used for this research.

The second component of forward contracts is foreign currency forward. In foreign currency forward contracts, one currency is exchanged for another between the parties at a specific time in the some future date (Gupta, 2006). Saunders and Cornett (2007) asserted that forward currency is important because it eliminates the risk of fluctuating foreign currency. Two researchers quoted foreign currency forward as a type of forward contracts out of fourteen selected articles synthesised in table 2.2 (row 3, column frequency). Thus, based on its importance, it is taken to be used for this research.

The next main component of financial derivatives is *future contract*. Future contract is an agreement between a seller and a buyer to deliver a particular asset at an agreed price today and its maturity will be in some future date. Future contract is used for hedging purposes particularly for financial markets' risk mitigation that takes place due to constant fluctuations in prices (Hull, 2017; Saunders & Cornett, 2007). A successful market of future contracts has some features such as large size of demand and supply of underlying asset or commodity, volatility in the prices of underlying assets, the quantifiable commodities being traded and the existence of competitive market(Sujjad et al., 2013; Kumari, 2011).

The drawbacks of forward contracts have been removed by the emergence of future contracts. The future contract removes the default risk disadvantage of forward contract by the facility of clearing house and margin system. The other drawback of forward contract of illiquidity is removed by the provision of cash settlement due to trading through organized exchange (Gupta, 2006; Kevin, 2015; Debasish, 2010). Eleven (11) researchers quoted this component out of fourteen (14) selected articles as synthesised in table 2.2 (row 4, column frequency). Based on the widely usage and their importance, future contracts have been taken for this research. There are five different components of future contracts which have been discussed by many researchers in their studies. It is necessary to take the narrow introduction of these types. Following are the components of future contracts.

The first component of future contracts is interest rate futures that is considered the most important and commonly used future instrument (Gupta, 2006). The interest rate risk is very big issue in the businesses which they face. The fluctuations in the interest rate create situation of loss for borrowers and lenders and interest rate future is used to minimize such issues (Sajjad et al., 2013; Vashishta & Kumar, 2010). Some securities are interest based such as municipal bonds, notes, debentures, bonds, treasury bills and euro dollar deposits as well (Fadun, 2013; Saunders & Cornett, 2007). Five (5) researchers out of fourteen (14) selected articles quoted this type of future contracts in synthesised table 2.2 (row 5, column frequency). Therefore, based on its importance, it is taken to be used for this research.

The second component of future contracts is foreign currency futures. As the name suggests, such kinds of futures are traded in foreign currencies. In addition, these futures are also called as exchange rate futures (Gupta, 2006). There are constant fluctuations in foreign exchange rate (Hull, 2017). Many stakeholders such as multinational firms, bankers, exporters, financial institutions and importers use exchange rate futures in order to hedge from foreign currency risk (Vashishta & Kumar, 2010; Sajjad et al., 2013). This type has been quoted by six (6) researchers in their studies as synthesised in table 2.2 (row

6, column frequency). Therefore, due to its importance it is taken to be used for this research.

The third component of future contracts is stock index futures. The stock market indices are used for future contracts. This type is important because it minimizes the risk of fluctuations in stock indices (Gupta, 2006). Many future contracts of various indices such as Value Line Index, Dow Jones Industrial Average and New York Stock Exchange Index are used in the markets of United States (Saunders & Cornett, 2007; Sajjad et al., 2013). This type of future contracts has been quoted by four (4) researchers out of fourteen (14) selected articles in synthesised table 2.2 (row 7, column frequency). Hence, it is taken to be used as the type of future contracts for this research.

The second last component of future contracts is bond index futures. The bond index futures are almost same to the stock index futures. Bond index futures are traded based on bond indices (Gupta, 2006). The motivational factor to use bond index futures is the mitigation of risk of bond index fluctuations (Vashishta & Kumar, 2010). Only four (4) researchers quoted this type of future contracts out of fourteen (14) selected articles as shown in the synthesised table 2.2 (row 8, column frequency). Therefore, it is taken to be used for this research.

The fifth and last type of future contracts is cost of living index futures. The second name of cost of living index futures is inflation futures. Such types of futures depend upon the cost of living index (Gupta, 2006). Unavoidable inflation risk is very common and these contracts are used to hedge from such risks. The investors including large firms, provident funds, mutual funds, governments and pension funds are the most common beneficiaries of such futures contracts (Saunders & Cornett, 2007). This type of future contracts has been quoted by two (2) researchers as shown in the synthesised table 2.2 (row 9, column frequency). Therefore, due to its significance, it is taken to be used for this research.

Options are the third main type of financial derivatives. Options are financial instruments, which are very unique and versatile in their nature (Gupta, 2006). These instruments discover their contestant nowhere (Saunders & Cornett 2007). Multiple underlying assets such as interest rates, currencies, debt instruments and stocks are available for options. In over the counter market, fund managers, corporate treasures and financial institutions trade in options (Apte, 2007; Smullen & Hand, 2005). The time value and intrinsic value of the option are the major factors that influence the price and premium of the option. As the price of underlying assets fluctuates, it varies the premium of the option. The speculators make profit due to changes in the premium from trading of options (Hull, 2005; Hull, 2017). This type has been quoted by twelve (12) researchers as shown in the synthesised table 2.2 (row 10, column frequency). Therefore, due to its importance it is taken to be the main type of financial derivatives used for this research. Following are the five components of options.

The first component of options is call option. An option, which gives the right, but not an obligation to its holder to buy an underlying asset at a strike price or exercise price before or on the maturity date is called a call option (Saunders & Cornett, 2007). When the stock price is more than strike price at the maturity of the contract, then call option should be executed (Hull, 2017). Therefore, call option is taken to be included in this research due to its importance. It has been quoted by ten (10) researchers from the selected fourteen (14) articles as shown in the synthesised table 2.2 (row 11, column frequency).

The second component of options is put option as synthesised in table 2.2 (row 12, column frequency). An option that gives the right but not an obligation to its holder to sell an underlying asset at a strike price or exercise price before or on the maturity date is called a put option. The buyer will buy the underlying asset at current price from the stock market when the exercise price of an underlying asset will be less than the strike price on the maturity of the contract (Saunders & Cornett 2007). This type of option has been quoted by ten (10) researchers from the fourteen (14) selected articles. Thus, it is taken to be used for this research.

The third component of options is foreign currency option as shown in the synthesised table 2.2. A contract that gives the right to sell or buy a particular currency at a predetermined exchange rate in specified time is called a foreign currency option (Smullen & Hand, 2005). There is a great importance of foreign currency options in the financial markets all over the world to mitigate foreign exchange exposures. Foreign currency options are traded primarily at the over-the-counter market (Gupta, 2006; Hull 2017). This type is taken to be used for this research because it has been quoted by five(5) researchers from the fourteen (14) selected articles as shown in the synthesised table 2.2 (row 13, column frequency).

The fourth component of options is interest rate options as shown in the synthesised table 2.2 (row 14, column frequency). An option that gives the right, but not the obligation, to the holder, to borrow funds at specific interest rate for a particular maturity date is called interest rate call option (Apte, 2007). This type is used to hedge against the interest rate fluctuations in future. These are used by speculators and traders for such purpose (Smullen & Hand, 2005). Five (5) researchers quoted this component in their researches from the fourteen (14) selected articles. It is taken to be used for this research due to its importance.

The *swap* is the fourth and last main type of financial derivatives as shown in the synthesised table 2.2. A contract between two parties to exchange a series of particular cash flows for a specified period in some future date is called a swap (Hull, 2017). Financial institutions have the facility of swaps to deal with their credit risk, foreign exchange risk and interest rate risk. Large firms manage their innovative and complex financing by using swaps. They use swaps for controlling many financial variables particularly borrowing cost. The market of swaps nurtured very fast in current era (Saunders & Cornett, 2007; Gupta, 2006). Swaps have been quoted by seven (7) researchers out of fourteen (14) selected articles for different types of financial derivatives in table 2.2 (row 15, column frequency). Therefore, due to its emerging importance it is taken to be a type of financial derivatives for this research. It has five different components.

The first component of swaps is interest rate swaps. An agreement in which two parties make a deal to make payments on predetermined date for future in different or same currencies until the expiration of predetermined date are called interest rate swaps (Apte, 2007). It is used to mitigate the risk of interest rate fluctuations in future (Sajjad et al., 2013). Seven (7) researchers quoted this component in their researches out of fourteen (14) selected articles that are synthesised in table 2.2 (row 16, column frequency). Therefore, it is taken to be a component of swaps used for this research.

The second component of swaps is currency swaps as shown in the synthesised table 2.2. A swap in which the sequences of two payments that are exchanged are designated in two different currencies is called currency swap (Apte, 2007; Hull, 2005). It is very important because it makes easy for both the parties to borrow cheap and easy loans in their domestic country. Due to fluctuations in exchange rate in future the cash flow will not affect from such changes (Pandian, 2009). Eight (8) researchers quoted this component in their studies from the fourteen (14) selected articles as shown in table 2.2 (row 17, column frequency). Therefore, due to its importance it is taken to be a component of swaps used for this research.

The third component of swaps is credit default swaps. Credit default swap is the most common used credit derivative (Hull, 2017). A contract in which a particular firm risk default is insured is called credit default swap. Firms use this component of swaps to minimize their default risk that may occur in some future date. The notional principal of credit default swap is the bond total face value that can be sold (Gupta, 2006; Saunders &Cornett, 2007). This component is quoted by three (3) researchers out of fourteen (14) selected articles as synthesised in table 2.2 (row 18, column frequency). Therefore, it is taken to be a component of swaps used for this research.

Another component of swaps is total return swaps as shown in the synthesised table 2.2.Total return swap is one of credit derivatives' types. Total return swap is a contract in which total return on bond for London Inter-Bank Offer Rate (LIBOR) along with its spread is exchanged. These swaps work as financial vehicles (Hull, 2017). The exposure to default by the firms is removed by using total return swaps by financial institutions. Two (2) researchers quoted this component of swaps in their researches out of fourteen (14) selected articles in table 2.2 (row 19, column frequency). Therefore, it is taken to be a component of swaps used for this research.

The final component of swaps is Swaption. An option based interest rate swap is called swaption. The favorable fluctuations in the interest rate give benefit to the firm with swaption (Ehsan, 2017). Swaption also protects the firms from unfavorable fluctuations in the interest rates. All the large financial firms, which are engaged with the corporate clients in interest rate swaps also buy or sell swaption from them as well (Hull, 2017). Two (2) researchers quoted this component of swaps as shown in the synthesised table 2.2 (row 20, column frequency). Thus, swaption is taken to be an important component of swaps used for this research.

As a result from the above synthesisation for this research forwards, futures, options and swaps are the four main types of financial derivatives. Furthermore, the forward contracts have two (2) subtypes such as forward rate agreement and foreign currency forwards. In addition, the future contracts also have five (5) subtypes including interest rate futures, foreign currency futures, stock index futures, bond index futures and cost of living index futures. Further, call options, put options, foreign currency options, interest rate options are the four (4) subtypes of option contracts. At the end, five (5) subtypes of swap contracts including interest rate swaps, currency swaps, credit default swaps, total return swaps and swaption have been described.

In conclusion, all types and subtypes of financial derivatives are included as a base of financial derivatives for this research. The purpose of discussing all these types does not mean that all these types of derivatives are used in Pakistan nor these all will be used and observed. It would depend upon the interviewee that which type of derivatives his firm is using. So, it is the overall picture of all the derivatives used around the globe.

2.4 Synthesisation of Non-Pakistan Literature on the Determinants of the Usage of the Financial Derivatives in General Businesses

The previous section discussed the types of financial derivatives. Before identifying the determinants of the usage of the financial derivatives in Pakistan SME businesses, the determinants of the usage of the financial derivatives in general businesses are synthesised. This section started to synthesize and review the determinants of the financial derivatives' usage from the non-Pakistan literature. It is important to separate the literature on non-Pakistan and is to take the global view and connect to a very structured approach before precising it down to the perspective of Pakistan.

Moreover, the purpose of using literature related to general businesses is to provide foundation for the SMEs literature and to make sure either these determinants are discussed in large businesses or not. If large businesses do not use financial derivatives then what would be the evidence for researcher to use financial derivatives in SME businesses.

In the gap of financial derivatives' usage, many studies have been conducted in developing and developed countries. In this exercise of literature search, more than one hundred and thirty (130) articles related to the subject topic of this study have been retrieved and reviewed (appendix 12). After the complete review practice, there are only sixteen (16) articles, which have been selected based on three characteristics. All the articles were selected based on a criteria set by the research. Firstly, all articles were fit to the definition of financial derivatives as discussed in section 2.2. Secondly, sixteen (16) articles were selected as most recent articles from the year 2001 to 2016 and were published in the refereed journals and also related to academic literature as shown in the synthesised table 2.3. Total fifteen (15) determinants of the usage of the financial derivative have been recognized, extorted and synthesised as shown in table 2.3.

Table 2.3
Synthesisation of Non-Pakistan Literature on the Determinants of the Financial Derivatives' Usage in General Businesses

	The Determinants of the usage of the Financial Derivatives in General Businesses	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**Frequency**	Used for this research
1	Firm Size	×	✓	✓	×	×	✓	✓	×	×	×	×	✓	×	✓	✓	×	**7**	✓
2	Leverage	✓	✓	✓	×	×	✓	×	×	×	×	×	×	×	✓	×	×	**5**	✓
3	Cash flow volatility	×	×	×	✓	×	×	✓	×	✓	×	×	×	×	×	×	✓	**4**	✓
4	Underinvestment Problem	✓	×	×	×	×	×	×	×	×	×	×	×	×	×	×	✓	**2**	✓
5	Management Incentives	✓	×	×	×	×	×	×	×	×	×	×	×	×	×	×	✓	**2**	✓
6	Growth opportunities	×	×	×	×	×	✓	×	×	×	✓	✓	✓	×	×	×	×	**4**	✓
7	Financial distress cost	✓	✓	✓	×	×	×	×	×	×	×	×	×	×	×	✓	×	**4**	✓
8	Reduction in taxes	×	×	×		×	✓	×	×	×	×	✓	×	×	×	×	✓	**3**	✓
9	Risk Reduction	×	×	×	✓	✓	×	✓	✓	×	×	×	×	×	×	✓	×	**5**	✓
10	Reduce Exchange rate exposure	×	×	×	×	×	×	×	✓	✓	✓	×	×	×	×	×	×	**3**	✓
11	Firm Value	×	×	×	×	✓	×	×	×	×	✓	×	×	×	×	×	×	**2**	✓
12	Reduce interest rate exposure	×	×	×	×	×	×	×	✓	✓	×	×	×	×	×	×	×	**2**	✓
13	Liquidity	✓	✓	×	×	×	✓	×	×	×	✓	×	×	×	×	×	×	**4**	✓
14	Agency Cost	×	×	×	×	×	×	×	×	×	×	×	×	✓	×	×	✓	**2**	✓
15	High Corporate Governance	×	×	×	×	×	×	×	×	×	×	×	✓	✓	×	×	×	**2**	✓
	Total	**5**	**4**	**3**	**2**	**2**	**5**	**3**	**3**	**3**	**4**	**2**	**3**	**2**	**2**	**3**	**5**		**15**

Legend:

1= Bartram, Brown & Fehle (2009)
2= Nguyen & Faff (2002)
3= Berkman, Bradbury, Hancock & Innes (2002)
4= Benson & Oliver (2004)
5= Bartram, Brown & Conrad (2011)
6= Heaney & Winata (2005)
7= Mallin, Ow-Yong & Reynolds (2010)
8= Hentschel & Kothari (2001)
9= Zhang (2009)
10= Nguyen & Faff (2003)
11= Sprcic & Sevic (2012)
12= Rossi (2013)
13= Fauver & Naranjo (2010)
14= Khumawala, Ranasinghe & Yan (2016)
15= Alnassar & Chin (2015)
16= Aretz, Bartram & Dufey (2007)

Source: developed for this research

The first determinant of the usage of the financial derivatives in general businesses is *firm size.* This determinant states that management of the firm takes positive impact of firm size in pursuing the usage of financial derivatives (Rogers, 2002). According to the literature, firm size is an important determinant of the usage of the financial derivatives. This common value entails firm size as the most crucial determinant towards the usage of financial derivatives. The researchers used this determinant which has huge persuasion over the usage of financial derivatives are included Nguyen and Faff (2002); Heaney and Winata (2005); Mallin, Ow-Yong and Reynolds (2001); Rossi, (2013); Berkman et al. (2002); Khumawala, Ranasinghe and Yan, (2016) and Alnassar and Chin (2015). There were seven (7) out of sixteen (16) selected articles, which revealed the significance of this determinant as shown in the synthesised table 2.3 (row 1, column frequency). Therefore, it is evident that firm size has major influence on the usage of the financial derivatives. Thus, it is taken to be investigated for this research due to its importance.

The second determinant of the usage of the financial derivatives is *leverage.* This determinant is the third most reported determinant in the past literature. Leverage is defined as the borrowing of funds to make investments in general. But in the context of derivatives' usage, investors control their large positions by small amount of outlay or even nothing else (Berkman & Bradbury 1996; Geczy *et al.*, 1997). According to Howton and Perfect (1999), as leverage increases, the management decision to use financial derivatives also increases. It is considered the important determinant and it is strongly related to firm decision to use financial derivatives. Moreover, the same findings have been reported by many researchers such as Bartram, Brown and Fehle (2009), Nguyen and Faff (2002), Berkman et al. (2002), Heaney and Winata (2005) and Khumawala et al. (2016). This determinant has been reported in five (5) out of sixteen (16) selected articles as shown in the synthesised table 2.3 (row 2, column frequency). Therefore, due to its frequent use, this determinant has taken to be used in this research.

The third most reported and prominent determinant is *cash flow volatility*. The cash flow volatility refers to the fluctuations in the cash flows of the firms (Guay & Kothari, 2003). The firms are required smooth streams of cash flows as the matching concept of international accounting standards requires (Barton, 2001). The usage of financial derivatives is to minimize the cash flow volatility of the firm. It has been found by the researchers that cash flow volatility plays very important role in the usage of financial derivatives. Firms use financial derivatives to keep their cash flows smooth. From the literature, several studies have found that cash flow volatility influenced the usage of financial derivatives significantly including Benson and Oliver (2004), Mallin et al. (2010), Aretz, Bartram and Dufey (2007) and Khumawala et al. (2016). Four (4) researchers out of sixteen (16) selected articles provided significant evidences and they also indicated that cash flow volatility prejudiced the firms to use financial derivatives as shown in the synthesised table 2.3 (row 3, column frequency). Therefore, this determinant is considered important to be explored in this research.

The next determinant taken from the non-Pakistan literature is *underinvestment problem* as shown in the synthesised table 2.3 (row 4, column frequency). The underinvestment problem refers to the level to which the owners or shareholders of the firm do not invest in low risk investment. The debt holders are saved by shareholders if the firm uses funds of debt holders in low risky projects and the streams of their returns are steady. These steady streams do not generate the excess returns for the shareholders (Cariola, Rocca & Rocca, 2005). Managers of the firms use derivatives to increase firm value by availability of internal funds. Therefore, underinvestment problem is an influencing factor of using financial derivatives (Gay & Nam, 1998). From the literature, two (2) studies pointed out the significance of underinvestment problem in the usage of financial derivatives (Bartram et al., 2009; Aretz et al., 2007). The other researches did not consider its relevant importance with financial derivative usage. They used it for other perspectives despite of investigating it with the usage of financial derivatives. In addition, even the underinvestment problem has been reported with the lowest frequency. Therefore, this determinant could be further examined in this research.

The next influencing determinant of the financial derivatives is *management incentives*. Management incentives are the mechanisms of compensation policy in order to minimize the issue of conflict of interest. The management incentives include stock options, performance based bonuses and other value increasing incentives (Jensen & Murphy, 1990). From the literature, many researchers found that management incentives have significant influence on the usage of financial derivatives (Bartram et al., 2009; Aretz et al., 2007). When managers' incentives are increased then they increase the usage of financial derivatives as well. Two (2) out of sixteen (16) selected articles confirmed this determinant as shown in the synthesised table 2.3 (row 5, column frequency). Therefore, based on its importance, this determinant is taken to be investigated in this research.

The sixth determinant of the usage of the financial derivatives is *growth opportunities*. This determinant refers to the availability of the internal and external funds to be used for growth opportunities. Availability of funds has positive influence on the firm decision to use financial derivatives (Lin & Smith, 2007). Firm increases its usage of financial derivatives when it has high growth opportunities in order to increase investment. Four (4) studies reported the significance of this determinant in the usage of financial derivatives as shown in the synthesised table 2.3 (row 6, column frequency) (Nguyen & Faff, 2002; Heaney & Winata, 2005; Rossi, 2013 and Sprcic & Sevic, 2012). When the firms have relatively low cash stocks, they use financial derivatives to meet their growth opportunities and hence there is a positive relationship between available funds for investment opportunities and usage of financial derivatives (Gay & Nam, 1998). Therefore, based on its importance, this determinant has been considered to be inquired in this research.

The next determinant of the usage of financial derivatives is *financial distress cost* that is extracted from the non-Pakistan literature. Financial distress is referred to the situation when a firm is not able to make payments to creditors that may lead to the firm toward bankruptcy. Firms take additional debts in order to continue their operations, which are associated with several costs, which are collectively known as financial distress costs (Altman & Hotchkiss, 2010).It means when the firms start to use financial derivatives their financial distress situation is low and all the costs associated with financial distress also decrease gradually (Bessembinder, 1991). From the literature, several studies noted down the importance of financial distress cost in the persuasion of using financial derivatives. Furthermore, they confirmed strong relationship between financial distress cost and the usage of financial derivatives (Bartram, et al., 2009; Nguyen & Faff, 2002; Berkman et al., 2002 and Alnassar & Chin, 2015). Four (4) out of sixteen (16) selected articles reported this determinant in their studies as shown in the synthesised table 2.3 (row 7, column frequency). Therefore, based on its significance, this determinant is taken to be investigated in this research.

The next important determinant of the usage of financial derivatives is *reduction in taxes* as shown in the synthesised table 2.3 (row 8, column frequency). Firms can enjoy two types of tax reduction incentives by using financial derivatives. First they can increase the debt capacity due to which their taxable income reduces as well as their taxes are reduced. On the other hand, firms use financial derivatives to reduce the expected tax liability on the condition that the tax function is convex (Donohoe, 2015). Multiple studies have shown correlation between the usage of financial derivatives and tax avoidance. In addition, it has been considered significant determinant of financial derivatives (Sprcic & Sevic, 2012; Aretz et al., 2007; Heaney & Winata, 2005). Three (3) researchers out of sixteen (16) selected articles indicated that the usage of financial derivatives is inclined to the reduction in taxes. Thus, reduction in taxes is kept as the determinant for further investigation for this research.

The ninth very prominent determinant is the *risk reduction*. The risk reduction refers to the protection against the adverse movements in the prices of the assets (Scharfstein & Stein, 1993). Risk to the firms emerges due to the fluctuations in the prices of underling assets directly or indirectly and it affects the firm value. The firms can exploit two different strategies to curtail this risk. They can lessen it by using diversification strategy or engaging themselves in financial deal in form of financial derivatives (Sprcic, 2007). It has been found by the researchers that risk diminution plays very imperative function in the usage of financial derivatives and it is negatively associated to the usage of financial derivatives. It means when the firm decides to use financial derivatives the volatility of the prices of assets dwindle. Firms use financial derivatives to keep the prices of their assets dreary. From the literature, several studies have found that reduction in risk influenced the usage of financial derivatives significantly including (Benson & Oliver, 2004; Bartram et al., 2011; Mallin et al., 2010; Hentschel & Kothari, 2001; Alnassar & Chin, 2015). Five (5) researchers out of sixteen (16) selected articles provided significant evidences and they also indicated that risk reduction influenced the firms to use financial derivatives as shown in synthesised table 2.3 (row 9, column frequency). Therefore, this determinant is considered important to be explored in this research.

The next determinant extracted from the non-Pakistan literature is the *exchange rate exposure* as shown in the synthesised table 2.3 (row 10, column frequency). The exchange rate exposure imputes to the level to which the value of the firm is induced by the foreign exchange rate maneuver. Firms use different investment strategies such as the usage of financial derivatives to lessen the exchange rate exposure (Dohring, 2008). Managers of the firms exercise different types of financial derivatives to reduce exchange rate exposure. Therefore, exchange rate exposure is an influencing factor of using financial derivatives (Gay & Nam, 1998). From the literature, three (3) studies alluded the significance of exchange rate exposure in the usage of financial derivatives (Hentschel & Kothari, 2001;

Zhang, 2009; Nguyen & Faff, 2003). The other studies did not deem its relevant significance with financial derivative usage. They used it for other perspectives despite of investigating it with the usage of financial derivatives. Therefore, this determinant is considered to be examined in this research due to its intendment.

The next succeeding determinant in the synthesised table 2.3 (row11, column frequency) is *firm value*. Firm value is the economic measure of a business, which reflects the market value. This determinant states that management of the firm takes the positive impingement of firm value in influencing the usage of financial derivatives (Jin & Jorion, 2006). According to the literature, firm value is an essential determinant for the usage of financial derivatives. This universal value requires that firm value is the most crucial determinant towards the usage of financial derivatives. The researchers used this determinant and confirmed that it has huge influence over the usage of financial derivatives (Nguyen & Faff, 2003; Bartram et al., 2011). There are only two (2) articles out of sixteen (16) selected articles, which had shown the significance of this determinant. Therefore, it is evident that firm value has major influence on the usage of financial derivatives. Thus, it is taken to be investigated in this research due to its importance.

Next, the twelfth determinant is the *interest rate risk exposure,* which has been extricated from the non-Pakistan literature. The interest rate exposure is an amount of financial loss that is faced by the firms due to adverse interest rate uncertainty. In addition, the firms face common risk due to expeditious escalation in the interest rate, when they are employed in refinancing the debt (Carneiro & Sherris, 2008). Those firms, which are affianced in the export and import business face the interest rate exposure risk. Therefore, interest rate exposure has significant influence on the firm's usage of financial derivatives. This affiliation between the usage of financial derivatives and interest rate exposure is negative because as the firms raise their usage of financial derivatives, their risk of interest rate exposure reduces accordingly (Hentschel & Kothari, 2001; Zhang, 2009). From the literature review, two (2) researchers out of sixteen (16) selected articles confirmed the correlation between the usage of financial derivatives and interest rate exposure as shown in the synthesised table 2.3 (row 12, column frequency). Thus, based on its substance, this determinant is taken to be inquired in this research.

The number thirteenth (13) determinant of the usage of financial derivatives is *liquidity*. Liquidity is the measure of the level to which a firm has adequate cash to convene its short term and paramount obligations. It also invokes the ability to novice the short term assets into cash without loss in the value of the asset (Hicks, 1962). A researcher stated that currently firms curtail their liquidity risk by holding interest rate derivatives. He also added that upcoming aggregate shortage of liquidity is truncated by executing different financial derivatives' contracts (Fecht & Hakenes, 2006). Researchers found in their studies that the usage of financial derivatives is strongly influenced by the liquidity of the firm. Further, they argue that if the liquidity of the firm increases, it influences the management of the firm to decrease the usage of financial derivatives and vice versa (Nguyen & Faff, 2002; Bartram et al., 2009; Heaney & Winata, 2005 and Nguyen & Faff, 2003). Four (4) researchers out of sixteen (16) selected articles confirmed association between the usage of financial derivatives and liquidity of the firm as shown in the synthesised table 2.3 (row

13, column frequency). Therefore, based on its implication, this determinant is taken to be explored in this research.

The next following determinant of the usage of financial derivatives is the *agency cost* as shown in the synthesised table 2.3 (row 14, column frequency). Agency cost is the name of a phenomenon, which influences the subtle behavior that is implemented by the management of the firm for their private benefits and to the spoil of other parties such as lenders (Tufano, 1998). The relationship between agency cost and the hedging by the usage of financial derivatives have been reported by many researchers (Mayers, 1977; Bessembinder, 1991). From the non-Pakistan literature, many studies concluded that agency cost influences the usage of financial derivatives (Fauver & Naranjo, 2010; Aretz et al., 2007). Two (2) studies out of sixteen (16) selected articles confirmed the relationship between the agency cost and the usage of financial derivatives. Therefore, this determinant is considered important to be investigated in this research.

The final determinant extracted from the non-Pakistan literature is the *high corporate governance*. Corporate governance is the set of codes, mechanisms, practices, rules and processes by which firms are monitored and directed. Corporate governance is involved in balancing the interests of the company and its other stakeholders (Solomon, 2007). The internal and external structure of corporate governance influences the usage of financial derivatives. The researcher further added that companies with strong corporate governance mechanisms use financial derivatives to minimize the exchange rate exposure as well (Lel, 2012). The literature found that corporate governance is one of the significant determinants of the usage of financial derivatives. Further, they indicated that the usage of financial derivatives is influenced positively by the tight corporate governance codes (Rossi, 2013; Fauver & Naranjo, 2010). Two (2) researchers out of sixteen (16) selected articles reported this determinant as shown in the synthesised table 2.3 (row 15, column frequency). Therefore, based on its importance, this determinant is taken to be explored in this research.

In conclusion, total fifteen (15) determinants of the usage of the financial derivatives have been synthesised and rationalized for this research from the sixteen (16) selected articles from the non-Pakistan literature as shown in the last column of the synthesised table 2.3. These fifteen (15) determinants are taken ahead to be the base for the synthesisation of the determinants of the usage of the financial derivatives in SME businesses.

2.5 Definitions of Small and Medium Enterprises (SMEs) Excluding Pakistan

The previous section described the synthesisation of non-Pakistan literature on the determinants of the usage of the financial derivatives in general businesses. Now this section explains the definitions of small and medium size enterprises from the perspective of different countries. It is interesting to know about the usage of financial derivatives in SMEs but it is imperative for the researcher to define SMEs and what makes up an SME first (Harif, Osman & Hoe, 2010). The isolation among large, small, micro and medium is very capricious (Hall, 2002). The problem is that researches make comparison of identical or equal with identical or equal across the economies. Comparable magnitudes are required to make comparison among classes. The definitions of SMEs in Asian countries with their distinctions are shown in table 2.4.

Table 2.4
Synthesisation of SMEs' Definitions in Asian Countries

SMEs' Definitions in Some Asian Countries

Country	**Sector**	**Number of Employees**		**Annual Sales (in millions) Home country currency**		**Total Assets/ Investments (in millions) Home country currency**	
		Small	**Medium**	**Small**	**Medium**	**Small**	**Medium**
India *	Manufacturing					2.5 - 50	50 – 100
	Services/Trade					1.0 - 20	20 – 60
	Manufacturing	5 - 75	75 - 200	0.3 - 15	15 - 50		
Malaysia**	Services/Trade	5 - 30	30 - 75	0.3- 3	3 - 20		
Indonesia ***		5 - 19	20 - 99	<0.344	<17.20		
Thailand ***		<50	51 - 200			< 2.305	<11.524
Combodia ***		11 - 50	51 - 200			<0.250	<0.500
Vietnam ***		<30	31 - 200				
Philppines ***		<99	100- 199				
Loas ***		<19	<99				

Legend:
* Micro, Small & Medium Enterprises Development (MSMED) Act, 2006
** National SME Development Council (NSDC) 2013
***Harif, Hoe and Ahmad (2013)

Source: developed for this research

Therefore, it is also indispensable to make the comparison of definition of SMEs in Pakistan with other business partners in South Asia. This section elaborates the definitions of SME businesses in Asian countries and particularly in Pakistan. The criteria of SMEs varies country to country.

SME businesses are divided into two main sectors, namely manufacturing and services sector. Only two (2) countries including India and Malaysia out of eight (8) selected countries divide their SMEs in manufacturing and services sectors as shown in the table 2.4 (column 2). On the other hand, six countries including Indonesia, Thailand, Combodia, Vietnam, Philppines and Loas do not divide their SMEs in manufacturing and services sector. Therefore, both of the categories of SME are recognized.

There are dynamic definitions of SMEs by various countries. Different countries used different measures to define SMEs. Further research at SMEs definition is based on the number of employees, which is the most common scale or measure used by business organizations of different countries in Asia as shown in table 2.4. The number of employees means total permanent employees working in the organization. The countries such as Malaysia, Indonesia, Thailand, Combodia, Vietnam, Philppines and Loas used number of employees for the definition of SMEs. On average, the number of employees in small enterprises starts from five (5) employees to fifty (50) employees.In addition, the average number of employees in medium size enterprises starts from fifty one (51) employees to two hundred (200) employees. On the contrary, India is one of the South Asian countries that do not use number of employees for the definition of SMEs.

Therefore, number of employees is considered important for the definition of SMEs used for this research as shown in table 2.5. Those manufacturing firms, which number of employees is less than fifty (50) are considered as small size and those, which number of employees is greater than fifty (50) and less than two hundred (200) are considered as medium size. On the other hand, in services sector the number of employees in a firm less than fifty (50) are considered as small and number of employees greater than fifty (50) and less than hundred (100) are considered as medium size firms.

Table 2.5
Definition of SMEs based on Number of Employees

Size / **Sector**	Small	Medium
Manufacturing	<50	50 - 200
Services	<50	50 - 100

Source: developed based on synthesised table 2.4

The second measure used for the definition of SMEs is annual sales or sales turnover by different countries as synthesised in table 2.4 (column 4). Annual sales or sales turnover is the firm total revenue generated in a particular year. Malaysia and Indonesia are only two (2) countries, which use this measure for the definition of SMEs as shown in the table 2.4. The requirement of annual sales or sales turnover in small size manufacturing and services enterprises in Malaysia is RM 0.3 million (USD 67,605) to RM 15.0 million (USD 3,380,282) and RM 0.3 million (USD 67,605) to RM 3.0 million (676,056) respectively. In the medium size manufacturing and services enterprises, the requirement of annual sales or sales turnover is RM 15.0 million (USD 3,380,282) to RM 50.0 million (USD 11,267,609) and RM 3.0 million (676,056) to RM 20.0 million (USD 4,507,043) respectively. Furthermore, in Indonesia the minimum annual sales or sales turnover is IDR 300 million (USD 22,476) for small size enterprises and IDR 2.5 billion (USD 187,308) for medium size enterprises. On the other hand, India, Thailand, Combodia, Vietnam, Philppines and Loas do not use this measure for the definition of SMEs. The definition of SMEs of Malaysia is very relative to this research because Malaysia is one of the strong economies in Asian countries. Therefore, annual sales or sales turnover is the second important measure used for the definition of SMEs for this research as shown in table 2.6.

Table 2.6
Definition of SMEs based on Sales Turnover

Size / Sector	Small RM	Medium RM
Manufacturing	300,000 - 15 million	15 - 50 million
Services	300,000 - 03 million	05 - 20 million

Source: developed based on synthesised table 2.4

Therefore, sales turnover is considered important for the definition of SMEs used for this research as shown in table 2.6. Those manufacturing firms, which sales turnover is RM 300,000 to RM 15.0 million are considered as small size and those, which sales turnover is RM 15.0 million to RM 50.0 million are considered as medium size. On the other hand, those services firms which sales turnover is RM 300,000 to RM 03.0 million are considered as small size and those firms which sales turnover is RM 05.0 million to RM 20.0 million are considered as medium size.

Total assets or total investments are the third measure that is used for the definition of SMEs by different countries. Total assets or total investments are the total resources owned by the firm, which are used for revenue generation. Three countries including India, Thailand and Combodia use this measure for the definition of SMEs. In India, all the manufacturing and servicing firms, which total assets or total investment is INR 2.5 million (USD 62,500) to INR 50.0 million (USD 1.25 million) and INR 1.0 million (USD 25000) to INR 20.0 million (USD 500,000) respectively are defined as small size enterprises.

On the other hand, those manufacturing and servicing firms, which total assets or total investment is INR 50.0 million (USD 1.25 million) to INR 100.0 million (USD 2.5 million) and INR 20.0 million (USD 500,000) to INR 50.0 million (USD 1.25 million) respectively are defined as medium size enterprises. On the opposite, the countries such as Malaysia, Indonesia, Vietnam, Philppines and Loas do not use total this measure for the definition of SMEs as shown in table 2.4.

Therefore, the total assets or total investment is not considered in this research because majority of Asian countries especially Malaysia that have an established SMEs industry did not use this measurement. In conclusion, there are two measurements namely sales turnover and number of employees, which are used as a base to illustrate the definition for SMEs in Pakistan.

Comparison of SMEs Definitions of Pakistan and Asian Countries. The discussion in previous section 2.5, synthesised the SMEs definition of the Asian countries as shown in table 2.4. Based on the above discussion, two measures of SMEs definition including number of employees and total sales or sales turnover are used as measuring scale to categorise a firm as an SME for this research. Now the SMEs definitions in Pakistan and the SMEs definitions synthesised and discussed in table 2.5 and table 2.6 are compared.

There are different government institutions in Pakistan, which define SMEs differently and these definitions have considerable differences. Small and Medium Enterprises Development Authority (SMEDA) in Pakistan is an authority that deals SMEs in Pakistan.

The definition of SMEs is upgraded by SMEDA and State Bank of Pakistan. SMEDA and State Bank of Pakistan provided new definition of SMEs in May 07, 2016 as shown in table 2.7. The number of employees and sales turnover are the measuring scales, which SBP uses for defining a service and a manufacturing business as small size enterprise. A manufacturing and servicing business is considered as small size enterprise if its total number of employees does not exceed from 50 employees and its sales turnover does not surpass PKR 150 million (USD 1,431,298) as shown in table 2.7.

Table 2.7
Synthesisation of SMEs Definitions in Pakistan

		Small		**Medium**	
Country		**Malaysia (table 2.5 and 2.6)**	**SMEDA**	**Malaysia (table 2.5 and 2.6)**	**SMEDA**
No. of employees	Services sector	5 - 30	20 - 50	30 - 75	51 - 100
	Manufacturing sector	5 - 75	20 - 50	75 - 200	51 - 250
Annual sales/Sales turnover	Services sector	0.3 - 3 (RM million)	75 – 150 (PKR million)	03 – 20 (RM million)	150 – 800 (PKR million)
	Manufacturing sector	0.3 - 15 (RM million)	75 – 150 (PKR million)	15 – 50 (RM million)	150 – 800 (PKR million)

Source: developed for this research

It can be concluded from the whole discussion above in section 2.5 that there is no hard and fast rule for the definition of an SME around the world. The definitions of SMEs in Malaysia and Pakistan are almost same. Both the countries use same measures to define an enterprise as small and medium as well as manufacturing and services. The definition of SMEs in Malaysia is very important as compared to other Asian countries. The definition of SMEs by Malaysia provides a platform for the definition of SMEs in Pakistan. Pakistan and Malaysia use the same measures such as number of employees and sales turnover or total sales for the definition of SMEs. The small size firms are not included in this study because these firms' total size is very low and they are not involved in import and export businesses as well.

The medium size manufacturing firms which are directly or indirectly involved in import and export are used to investigate the usage of financial derivatives in this research. Therefore, this research is taken number of employees and sales turnover or total sales to be used for the definition of SMEs in Pakistan. Those medium size manufacturing firms which total numbers of employees are between 51-250 employees and total sales or sales turnover is between PKR 150-800 millions are considered SME for this research as shown in table 2.8.

Table 2.8
Definition of SMEs Used for this Research

Medium Size	No. of Employees	Sales turnover
Manufacturing sector	Full time employees 51- 250	Annual sales turnover PKR 150-800 million
Services sector	Full time employees 51- 100	Annual sales turnover PKR 150-800 million

Source: developed for this research

2.6 Synthesisation of Non-Pakistan Literature on the Determinants of the Usage of the Financial Derivatives in SME Businesses

In the previous section, the definition of SMEs has been explained. This section reviews non-Pakistan literature on the determinants of the financial derivatives' usage in SME businesses. The purpose of this section is to synthesise and compare the determinants of financial derivatives in SME businesses against the determinants divulge in non-Pakistan literature for general businesses as shown in the synthesised table 2.3.

Table 2.9
Synthesisation of Non-Pakistan Literature on the Determinants of the Usage of the Financial Derivatives in SME Businesses

	The Determinants of the Financial Derivatives' usage in SME Businesses	From non-Pakistan Literature in general businesses (Table 2.3)	Pennings & Garcia (2004)	Mathias Bank & Robert Weisner (2012)	Hrubosova & Kamenikova (2007)	Fantini (2014)	**Frequency**	Used for this research
1	Firm Size	✓	✓	×	×	✓	**3**	✓
2	Leverage	✓	✓	×	×	✓	**3**	✓
3	Cash flow volatility	✓	×	×	×	×	**1**	✓
4	Underinvestment Problem	✓	×	×	×	✓	**2**	✓
5	Management Incentives	✓	×	×	×	×	**1**	✓
6	Growth Opportunities	✓	×	×	×	✓	**2**	✓
7	Financial distress cost	✓	×	×	×	×	**1**	✓
8	Reduction in taxes	✓	×	×	×	×	**1**	✓
9	Risk Reduction	✓	✓	×	×	×	**2**	✓
10	Reduce Exchange rate Exposure	✓	×	×	✓	✓	**3**	✓
11	Firm Value	✓	×	×	×	×	**1**	✓
12	Reduce interest rate Exposure	✓	×	×	×	✓	**2**	✓
13	Liquidity	✓	×	×	×	✓	**2**	✓
14	Agency Cost	✓	×	×	×	×	**1**	✓
15	High Corporate Governance	✓	×	×	×	×	**1**	✓
16	Risk Attitude	×	✓	×	×	×	**1**	✓
17	Risk Perception	×	✓	×	×	×	**1**	✓
18	Decision Making Unit	×	✓	×	×	×	**1**	✓
19	Lack of Awareness	×	×	✓	×	×	**1**	✓
20	Lack of Expertise	×	×	✓	×	×	**1**	✓
	Total	**15**	**6**	**2**	**1**	**7**		**20**

Source: developed for this research

There are very limited studies on the determinants of the financial derivatives in SME businesses have been conducted. In addition, the studies on the determinants of financial derivatives in SME businesses are very finite to the context of non-Pakistan literature. Only four (4) articles found and fit into the SMEs definition used for this research synthesized in table (2.9), which had been published in the referred journal from the year 2000 and onward are chosen to review. These studies have been conducted in the research area of derivatives that best suites the definition of financial derivatives used in this research and in SME businesses also. The synthesisation of non-Pakistan SME businesses related literature is shown in table 2.9. Even two studies out of four selected articles are conducted on SME businesses particularly on commodity derivatives and weather derivatives. Therefore, the determinants of these studies could also be used as a base for financial derivatives' perspective in SME businesses.

The first determinant of the usage of the financial derivatives in SME businesses is *firm size*. This determinant has been included in the usage of financial derivatives from the synthesisation of non-Pakistan literature for general businesses as shown in table 2.9 (row 1, column 3). In addition, this determinant has been cited by two (2) out of four selected articles in SME businesses literature as shown in the synthesised table 2.9 (row 1, column frequency). Therefore, based on its importance, this determinant is considered to be used for further investigation.

The next determinant of the usage of the financial derivatives in SME businesses is *leverage* as shown in the synthesised table 2.9 (row 2, column frequency). In table 2.9 (row

2, column 3) the non-Pakistan literature reported this determinant of the usage of the financial derivatives. Furthermore, this determinant also has been verified by the SME businesses literature. Two (2) researchers out of four (4) selected articles used this determinant in their studies. Thus, this determinant is selected to be further explored in this research due to its significance.

The third determinant of the usage of the financial derivatives is the *cash flow volatility*. On one side, this determinant has been considered in the usage of financial derivatives in non-Pakistan literature in table 2.9 (row 3, column 3). On the other hand, this determinant did not found in any of the articles in SME businesses literature as shown in the synthesised table 2.9 (row 3, column frequency). This determinant is still important because the high volatility of cash flows affects the SME businesses because it minimizes the trustworthiness of their lending financial institutions. Firms need to keep their cash flows smooth. Therefore, this determinant is used in this research for further investigation.

Underinvestment problem is the fourth determinant of the usage of the financial derivatives. It has been used in the non-Pakistan literature as a determinant of the usage of financial derivatives as shown in the table 2.9 (row 4, column 3). In the synthesised table 2.9 (row 4, column frequency), two (2) out of four (4) selected articles considered this determinant. Therefore, this determinant is taken important to be further investigated in this research.

The fifth determinant of the usage of financial derivatives is *management incentives* as shown in the synthesised table 2.9. The non-Pakistan literature verified it as the determinant of the usage of the financial derivatives in table 2.9 (row 5, column 3), but this determinant has not been considered by the SME businesses literature (row 5, column frequency in table 2.9). This determinant is very important because if management of the firm is risk averse they can be motivated to engage themselves in risky investments by offering them high incentives. Thus, this determinant is considered to be used in this research due to its significance.

Next, the sixth determinant of the usage of the financial derivatives is *growth opportunities*. The non-Pakistan literature on the determinants of the usage of the financial derivatives used this determinant as shown in table 2.9 (row 6, column 3). Moreover, SME businesses literature also used this determinant in their researches. Two (2) out of four (4) selected articles used this determinant as shown in the synthesised table 2.9 (row 6, column frequency). Hence, this determinant is taken to be further explored in this research based on its significance.

Financial distress cost is the seventh determinant of the usage of the financial derivatives. In the synthesised table 2.9 (row 7, column frequency), it is shown that this determinant is not taken important by the SME businesses literature to be discussed. Opposite to SME businesses, it has been used in the non-Pakistan literature as a determinant of the usage of the financial derivatives (row 7, column 3 in table 2.9). Even this determinant is not used in SME businesses literature but its importance cannot be ignored. Those firms, which may feel that they face financial distress cost in future, can engage themselves in the usage of the financial derivatives and vice versa. When the financial distress cost is high the trust of contracting parties decreases. Thus, this determinant is chosen to further explore in this research later due to its vital role.

The eighth determinant of the usage of the financial derivatives from the synthesised table 2.9 (row 8, column frequency) is *reduction in taxes*. The non-Pakistan literature on the determinants of the usage of financial derivatives cited this determinant as shown in the table 2.9 (row 8, column 3). On the contrary, SME businesses literature did not verify this determinant, which suggested that this determinant is neither significant nor critical. But this determinant is not ignored because when firms use financial derivatives their ratio of debt increases and their interest expenses reduces their taxable income. Hence, this determinant may be taken to be further investigated later on in this research.

The next following determinant of the usage of the financial derivatives is the *risk reduction*. This determinant has been included in the usage of the financial derivatives in non-Pakistan literature as shown in the table 2.9 (row 9, column 3). In addition, this determinant has been used by two (2) out of four (4) selected articles in SME businesses literature as shown in the synthesised table 2.9 (row 9, column frequency). Therefore, based on its importance, this determinant is chosen to be analyzed in this research.

Next, the tenth determinant of the usage of the financial derivatives in SME businesses is *exchange rate exposure* as shown in the synthesised table 2.9 (row 10, column frequency).

This determinant of the usage of the financial derivatives is reported by non-Pakistan literature in table 2.9 (row 10, column 3). Furthermore, this determinant has been used by the SME businesses literature also. Two (2) studies out of four (4) selected articles used this determinant in their studies. Thus, this determinant is preferred to be further explored in this research due to its significance.

Determinant number eleventh of the usage of financial derivatives considered for SME businesses is *firm value*. This determinant has been reported in the usage of financial derivatives in non-Pakistan literature as shown in the table 2.9 (row 11, column 3). On the other hand, SME businesses literature did not consider it for verification as shown in the synthesised table 2.9 (row 11, column frequency). It does not matter that SME businesses literature did not used this determinant but it is still important because those firms that value is increasing can influence the management to engage in using financial derivatives. Therefore, this determinant cannot be ignored and it is considered for further investigation in this research.

Interest rate exposure is the twelfth common determinant of the usage of the financial derivatives. It has been cited in the non-Pakistan literature as a determinant of the usage of financial derivatives (row 12, column 3 in table 2.9). In the synthesised table 2.9 (row 12, column frequency), two (2) researchers out of four (4) selected articles used this determinant by the SME businesses literature. Therefore, this determinant is considered to be further explored in this research.

The thirteenth determinant of the usage of the financial derivatives in SME businesses from the synthesised table 2.9 (row 13, column frequency) is *liquidity*. The non-Pakistan literature on the determinants of the usage of financial derivatives on general businesses used this determinant (row 13, column 3 in table 2.9). In addition, SME businesses literature also used this determinant in their studies. Two (2) out of four (4) selected articles used this determinant. Hence, this determinant is taken to be further analyzed in this research based on its importance.

Agency cost is the other determinant of the usage of the financial derivatives in SME businesses as shown in the synthesised table 2.9 (row 14, column frequency). This determinant of the usage of financial derivatives is considered by non-Pakistan literature on general businesses (row 14, column 3 in table 2.9). On the other hand, this determinant has not considered critical to be investigated by the SME businesses literature. This determinant is also very important because firms pay more to managers in order to solve the issue of conflict of interest. When conflict of interest is resolved then management of the firm can make risky decisions. Thus, this determinant is used to be verified in this research due to its importance.

The fifteenth determinant of the usage of the financial derivatives is *high corporate governance*. It has been verified in the non-Pakistan literature on general businesses as a determinant of the usage of financial derivatives as shown in table 2.9 (row 15, column 3). As shown in the synthesised table 2.9 (row 15, column frequency), this determinant is not considered by the SME businesses literature. Even this determinant is ignored by the SME literature, still it is important because when corporate governance rules are very strict then the financial contracts are executed timely, otherwise not. Therefore, this determinant is further investigated in this research later on.

The sixteenth newly extracted determinant of the usage of the financial derivatives from the SME businesses literature is the *risk attitude.* This determinant stated that managers have different risk behaviors while making financial decisions. Are managers risks averse or risk takers, it depends upon their attitude (Johnson & Powell, 1994). The researcher used this determinant, which has huge persuasion over the usage of financial derivatives (Pennings & Garcia, 2004). Only one (1) out of four (4) articles has revealed the significance of this determinant as shown in the synthesised table 2.9 (row 16, column frequency). Therefore, it is evident that risk attitude has major influence on the usage of financial derivatives. Thus, it is taken to be investigated in this research due to its importance.

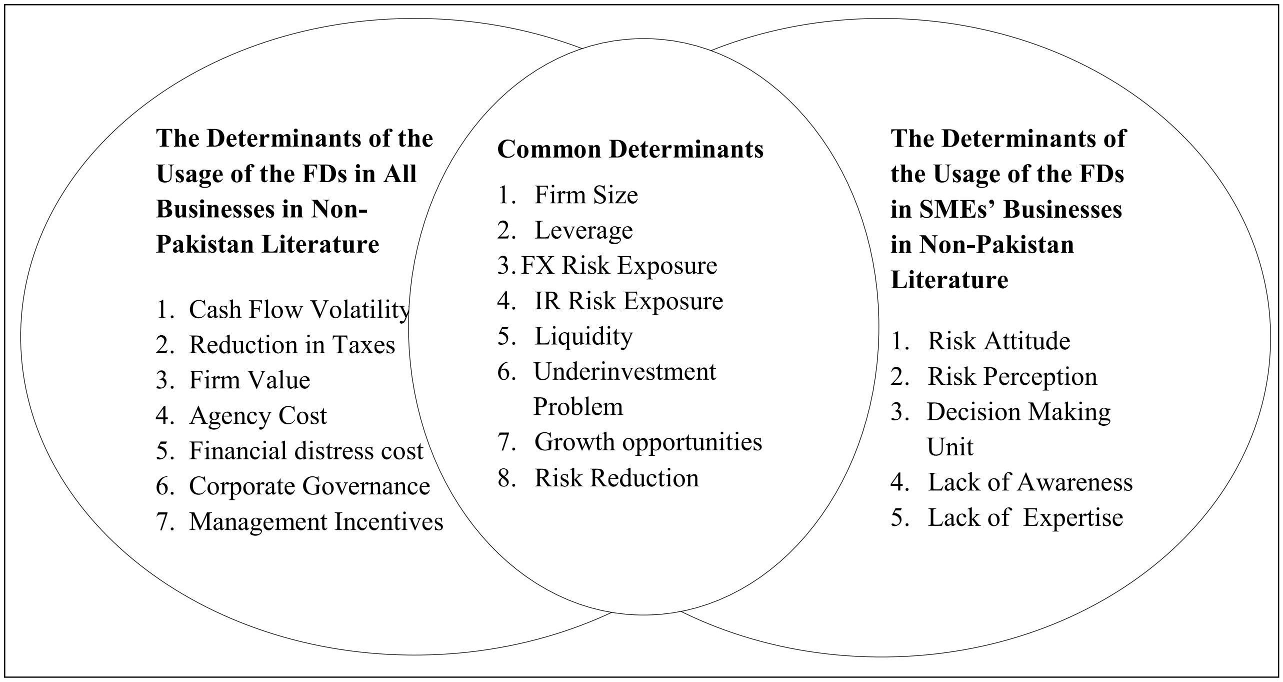
The next determinant of the usage of financial derivatives in SME businesses is the *risk perception.* Risk perception is defined as the subjective finding about the harshness of risk what people make (Wright, Pearman & Yardley, 2000). The economic theory suggests that it is very important to know about the hedging behavior (Collins, 1997).It is considered important determinant and it is positively related to firm decision to use financial derivatives. This determinant has been reported in only one article out of four (4) selected articles as shown in the synthesised table 2.9 (row 17, column frequency). Therefore, due to its frequent use, this determinant is selected to be used in this research.

The eighteenth determinant with the reported frequency of only one (1) that can convince the usage of the financial derivatives in SME businesses is the *decision making unit (DMU)*. Decision making unit generally states the level to which the important persons or firms around the managers that have influence on the mangers can suggest the managers to use financial derivatives (Nance et al., 1993). SME businesses take the suggestions of advisory or consultancy firms in order to make their financial decision, if they provide them optimized suggestions. The usage of the financial derivatives by SME businesses can be influenced positively by DMU. This relationship between DMU and the usage of financial derivatives have been confirmed by many researchers (Geczy et al., 1997; Carter & Sinkey 1998). From the literature, a researcher has found the significant positive association between DMU and the usage of financial derivatives (Pennings & Garcia, 2004). Only one (1) researchers out of four (4) selected articles provided significant evidences and they also indicated that DMU prejudiced the firms to use financial derivatives as shown in table 2.9 (row 18, column frequency). Therefore, this determinant is considered important to be explored in this research.

The next determinant which is at number nineteenth extracted from the SME businesses literature review is *lack of awareness*. The lack of awareness refers to the situation when the investors, who are concerned to the financial derivatives, are not fully aware about the pros and cons and their usage. In addition, this determinant is considered the key point in the risk management instruments application (Arnell & Delaney, 2006). From the SME businesses literature, a research finding confirmed the evidence that there is a relationship between the lack of awareness and the usage of financial derivatives (Bank & Wiesner, 2012). Further, it is indicated that awareness plays very important role in the usage of financial derivatives. There is only one (1) out of four (4) selected articles confirmed this determinant as shown in the synthesised table 2.9 (row 19, column frequency). Therefore, based on its importance, this determinant is taken to be investigated in this research.

The last and twentieth determinant taken from SME businesses literature is *lack of expertise* as shown in the synthesised table 2.9 (row 20, column frequency). Lack of expertise refers to the low level of abilities and skills of the management to use financial derivatives. This determinant also includes the drawbacks in institutional framework. Those investors who are well skilled and have abilities can use the financial derivatives efficiently and effectively (Pennings & Garcia, 2004). From the literature, managers and investors of the firms use derivatives to increase firm value by their skills and competencies relevant to the financial derivatives. Only one (1) study, as shown in table (2.9), identifies the significance of lack of expertise in the usage of financial derivatives (Bank & Wiesner, 2012). Therefore, based on the importance of this determinant, it is considered to be explored in this research.

In conclusion, the synthesisation of the non-Pakistan literature for SME businesses perspective is evaluated. Total twenty (20) determinants of the usage of financial derivatives in SME businesses have been confirmed. The surveillances and comparisons can be sketched from the table 2.9. The comparison between non-Pakistan SME businesses literature and non-Pakistan literature in general businesses is shown in figure 2.2.



Figures 2.2
Surveillances and Comparison of the Determinants of the Usage of the Financial Derivatives between Non-Pakistan Literature in General Businesses and SME Businesses Literature

Source: developed for this research

Total twenty (20) determinants of the usage of financial derivatives in SME businesses are found that include fifteen (15) determinants of the usage of financial derivatives, which are carried forward from the synthesisation of non-Pakistan literature review in general businesses as shown in table 2.9.There are eight (8) determinants of the usage of financial derivatives identified which are common in both non-Pakistan literature on general businesses and SME businesses literature as shown in figure 2.2.

The common determinants of the usage of financial derivatives identified in both non-Pakistan literature on general businesses and SME businesses literature reiterate and imply each other. These determinants are pivotal and significant to influence the usage of financial derivatives in SME businesses. Five (5) fresh determinants of the usage of financial derivatives are found in SME businesses literature. Seven (7) determinants of the usage of financial derivatives are acknowledged only in the non-Pakistan literature on general businesses as shown in table 2.9, which are not found in the SME businesses. Eight (8) determinants are common, which are found from both literatures as shown in figure 2.2.

2.7 Synthesisation of Pakistan Literature on the Determinants of the Usage of the Financial Derivatives in SME Businesses

The previous section discussed and synthesised SME businesses literature. The current section begins to describe the synthesisation of Pakistan literature on the determinants of the usage of financial derivatives in SME businesses. Limited research is available in Pakistan on the usage of financial derivatives. Very few studies have been conducted on the usage of financial derivatives but in large firms. On the other hand, no single study about the usage of the financial derivatives in SME businesses in Pakistan is found.

2.8 Preliminary Theoretical Framework

The discussion has been done on the evolution of definition for financial derivatives in section 2.2 and types of derivatives in section 2.3, reviewing and synthesisation of non-Pakistan literature on the determinants of the usage of the financial derivatives in general businesses in section 2.4, definition of SME businesses in section 2.5 for this research, reviewing and synthesisation of non-Pakistan literature of the determinant of the usage of the financial derivatives on SME businesses in section 2.6 and synthesisation of Pakistan literature on SME businesses in section 2.7.

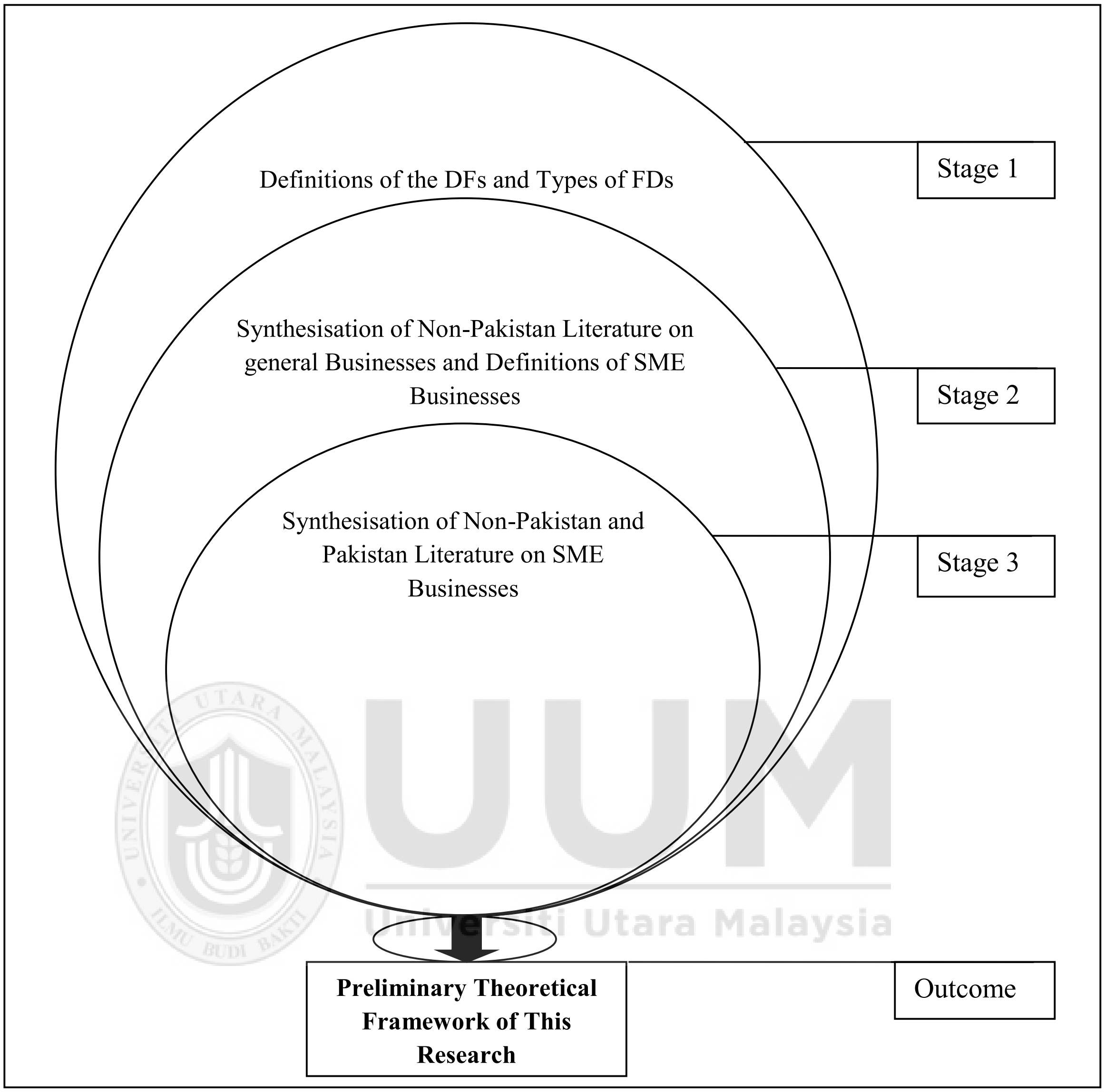


Figure 2.3
Preliminary Theoretical Framework Development Appraoch

Source: developed for this research

Preliminary theoretical framwork development approach is funnel like approach which consisted of three (3) stages for this research as shown in figure 2.3. The definition of financial derivatives and types of financial derivaitves used for this research fall in stage 1. Next, stage two (2) synthesised the determinants from the non-Pakistan literature on general businesses and definitions of SME businesses. The determinants of non-Pakistan literature on SME businesses and Pakistan literature on SME businesses are reviewed and synthesised in stage 3.

The outcome of all stages strengthened the selected determinants from the earlier stages. The outcome of the this funnel like approch is a preliminary theoretical framework of the determinants of the usage of financial derivatives in SME businesses in Pakistan.

All discussion in the above sections has provided a sound foundation to develop a preliminary theoretical framework for this research. The following section begins the discussion on the formation of preliminary theoretical framework for this research. There are twenty (20) determinants of the usage of the financial derivatives in SME businesses for the purpose of this research, which are initially categorized into two main categories including financial and non financial determinants. The financial determinatns are those determinants, which are directly involved with the financial operations of the firm. Moreover, non-financial determiants are those determinants, which are direclty related to the managemnt's decisions, expertise and their behaviors.

In addtition, financial and non financial determinants of the usage of the financial derivatives are further divided into two (2) sub categories namely core and non-core determinants. Core determinants are categorized as "core" based on three characteristics, i) common in non-Pakistan litrature in all general businesses and non-Pakistan literature in SME businesses, ii) most frequently used in literature and, iii) main or major determinants. On the contrary, non-core determinants are categorized as "non-core" based on three characteristics, i) not common in non-Pakistan litrature in all general businesses and non-Pakistan literature in SME businesses, ii) not frequently used in literature and iii) are least important. As a result of this categorization, a preliminary theoretical framework is developed for this research as shown in figure 2.4.

Financial Determinants	**Non-Financial Determinants**
(Core) 1. Firm Size 2. Leverage 3. Underinvestment Problem 4. FX Risk Exposure 5. IR Risk Exposure 6. Liquidity	**(Core)** 1. Growth Opportunities 2. Risk Reduction
(Non-Core) 1. Cash Flow Volatility 2. Financial Distress Cost 3. Reduction in Taxes 4. Firm Value 5. Agency Cost	**(Non-Core)** 1. Management Incentives 2. Corporate Governance 3. Risk Attitude 4. Risk Perception 5. Decision Making Unit 6. Lack of Awareness 7. Lack of Expertise

The Determinants of the Usage of the Financial Derivatives within Pakistan SME Businesses

Figure 2.4
Preliminary Theoretical Framework

Source: developed for this research

As shown in figure 2.4, the core financial determinants category captured six (6) determiants, which are firm size, leverage, underinvestment problem, FX risk exposure, IR risk exposure and liquidity. The non-core financial determinants category contains five (5) determinants that are cash flow volatility, financial distress cost, reduction in taxes, firm value and agency cost. The third category core non-financial determinants consists of two (2) determinants including growth opportunities and risk reduction.The fourth category non-core, non-financial determinants comparised of seven determinants, which are management incentives, corporate governance, risk attitude, risk perception, decision making unit, lack of awareness and lack of expertise.

In conclusion, a preliminary theoretical framework has been successfully developed for this research. The following section dicusses the five research issues pertaining to this research based on preliminary theoretical framework as shown in figure 2.4.

2.9 Research Issues

The previous section explained the preliminary theoretical framework on the determinants of the usage of the financial derivatives in SME businesses in Pakistan for this reseach. This section discusses the five research issues of this research in order to further understand and investigate the preliminary theoretical framework.

Research Issue 1: Determinants for the SME businesses in Pakistan to use financial derivatives

From the synthesisation of non-Pakistan literature on general businesses and non-Pakistan literature on SME businesses as discussed in the previous sections, there are twenty (20) determinants that could be as the determinants of the usage of the financial derivatives in SME businesses in Pakistan as shown in figure 2.5.

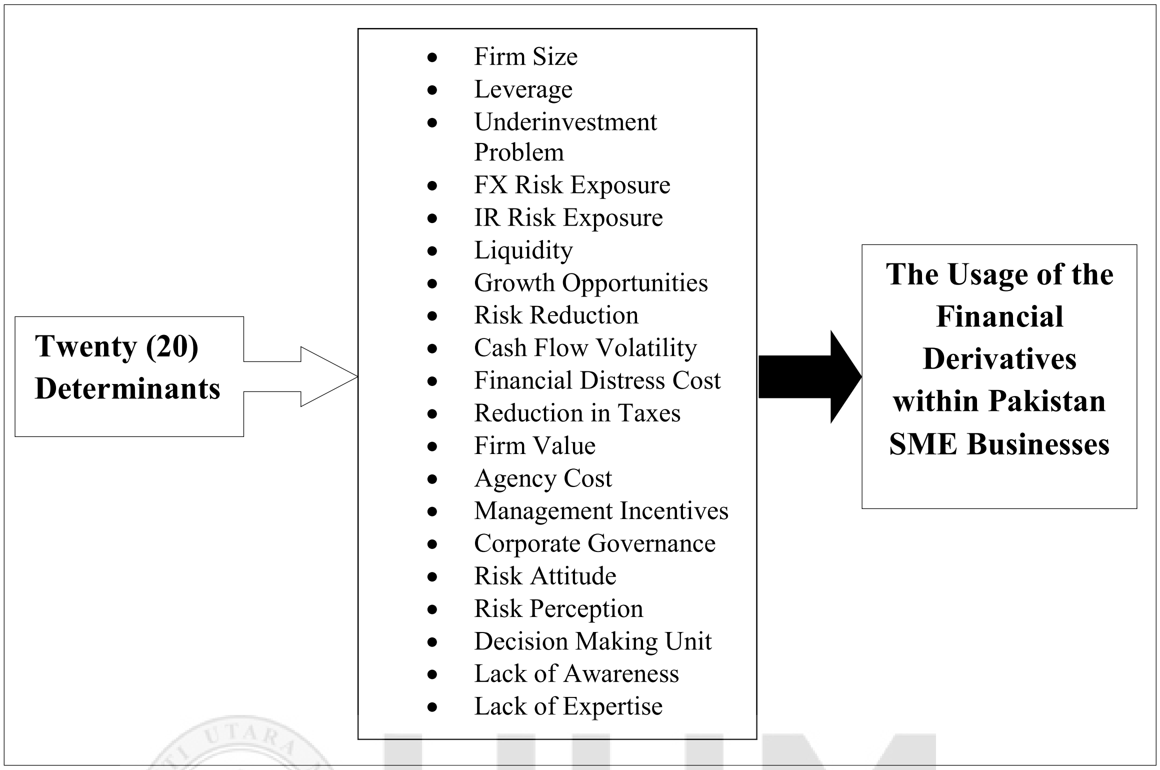


Figure 2.5
The Determinants for the SME Businesses in Pakistan to Use Financial Derivatives

Source:developed for this research

Research Issue 2: Core financial determinants for the SME businesses in Pakistan to use financial derivatives

From the synthesisation of non-Pakistan literature on general businesses and non-Pakistan literature on SME businesses as discussed in the previous sections, there are six (6) core financial determinants that could be the determinants of the usage of the financial derivatives within SME businesses in Pakistan as shown in figure 2.6.

Figure 2.6
The Core Financial Determinants for the SME Businesses in Pakistan to Use Financial Derivatives

Source:developed for this research

Research Issue 3: Non-core financial determinants for the SME businesses in Pakistan to use financial derivatives

From the synthesisation of non-Pakistan literature on general businesses and non-Pakistan literature on SME businesses as discussed in the previous sections, there are five (5) non-core financial determinants that could be the determinants of the usage of the financial derivatives within SME businesses in Pakistan as shown in figure 2.7.

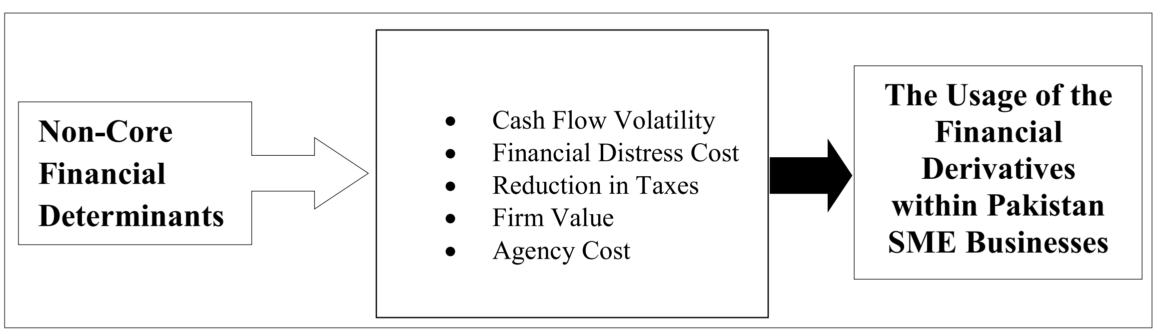


Figure 2.7
The Non-Core Financial Determinants for the SME Businesses in Pakistan to Use Financial Derivatives

Source:developed for this research

Research Issue 4: Core non-financial determinants for the SME businesses in Pakistan to use financial derivatives

From the synthesisation of non-Pakistan literature on general businesses and non-Pakistan literature on SME businesses as discussed in the previous sections, there are two (2) core non-financial determinants that could be the determinants of the usage of the financial derivatives in SME businesses in Pakistan as shown in figure 2.8.

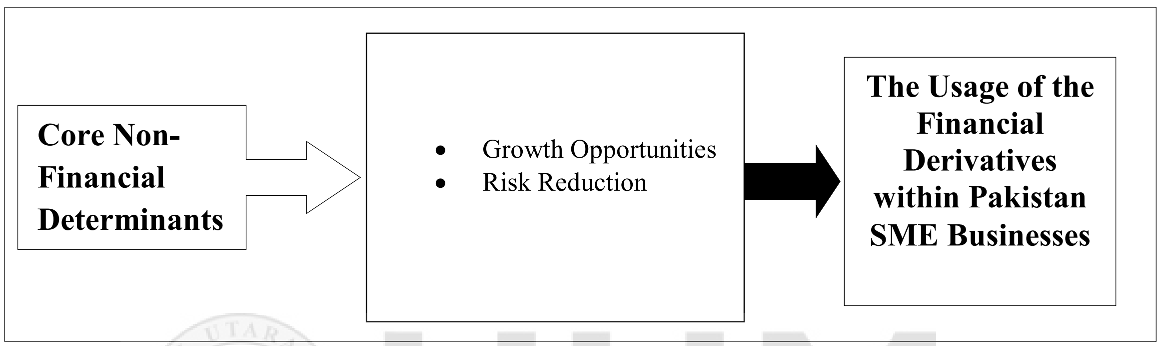


Figure 2.8
The Core Non-Financial Determinants for the SME Businesses in Pakistan to Use Financial Derivatives

Source:developed for this research

Research Issue 5: Non-core, non-financial determinants for the SME businesses in Pakistan to use financial derivatives

From the synthesisation of non-Pakistan literature on general business and non-Pakistan literature on SME businesses as discussed in the previous sections, there are seven (7) non-core, non-financial determinants that could be the determinants of the usage of the financial derivatives in SME businesses in Pakistan as shown in figure 2.9.

Figure 2.9
The Non-Core, Non-Financial Determinants for the SME Businesses in Pakistan to Use Financial Derivatives

Source:developed for this research

2.10 Summary

After reviewing the past literature, it was divulged that a lot of studies had been conducted to investigate the determinants that decided the usage of the financial derivatives in general businesses around the world. Many authors pointed out and reported in their studies a list of determinants that could determine the usage of the financial derivatives. The determinants were generally explained and context was also very clear that these studies were selected which were fit to the definition of financial derivatives and the countries and other criteria are all given in table provided in appendix 12. However, despite of all the researches that had been conducted to examine and understand the determinants of the usage of the financial derivatives, there is still very limited research and concentration particularly on the usage of the financial derivatives on the SME businesses in Pakistan. This embodies a gap in the existing knowledge in the SME industry, particularly in sight of the important contribution of SME businesses in the economic growth of the country.

In this chapter, the definition of financial derivatives have been constructed and finalized for this research and the types of financial derivatives have also been explained. Fifteen (15) determinants of the usage of financial derivatives have been identified from the synthesisation of non-Pakistan literature on general businesses. The definitions of SME businesses from different countries' perspectives have been reviewed and finalized for this research. Subsequent to SME definitions, twenty (20) determinants of the usage of financial derivatives in SME businesses have been identified and finalized for this research after reviewing the literature. Literature has been reviewed in order to identify the determinants of the usage of the financial derivatives on Pakistan SME businesses but even a single study could not be found.

There are four quadrants of preliminary theoretical framework developed for this research, which encapsulated the twenty (20) determinants of the usage of the financial derivatives in SME businesses in Pakistan. Each quadrant of the preliminary theoretical framework contains its relevant determinants of the usage of the financial derivatives in SME businesses in Pakistan. Five research issues have been developed to further understand and explore the problem under investigation in this research.

After the whole discussion in this chapter 2 and according to present circumstances, it was justified and important for this research to carried out to explore the determinants of the usage of financial derivatives within SME businesses in Pakistan so that their value can be enhanced by strengthening their business competitiveness in global markets. The findings of this research provided a deep insight into what determines the usage of the financial derivatives by the owners of SME businesses. After having knowledge and information regarding the usage of financial derivatives, the SME businesses' owners can make significant changes in their financial decisions to enhance and improve their market share and firm performance respectively.

In conclusion, based on the exercise of literature review, this research is considered appropriate, significant and in current Pakistan economic and financial context. Furthermore, this research is in line with the government's efforts to boost the growth of SME businesses and to enlarge the contribution of SME businesses to the economy of Pakistan.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

Chapter 2 provided the foundation of this research after reviewing the current literature and formulated a preliminary theoretical framework for this research related to the determinants of the usage of the financial derivatives within SME businesses in Pakistan. This chapter 3 discusses how this research is carried out to justify the research issues formulated from the preliminary theoretical framework in chapter 2.

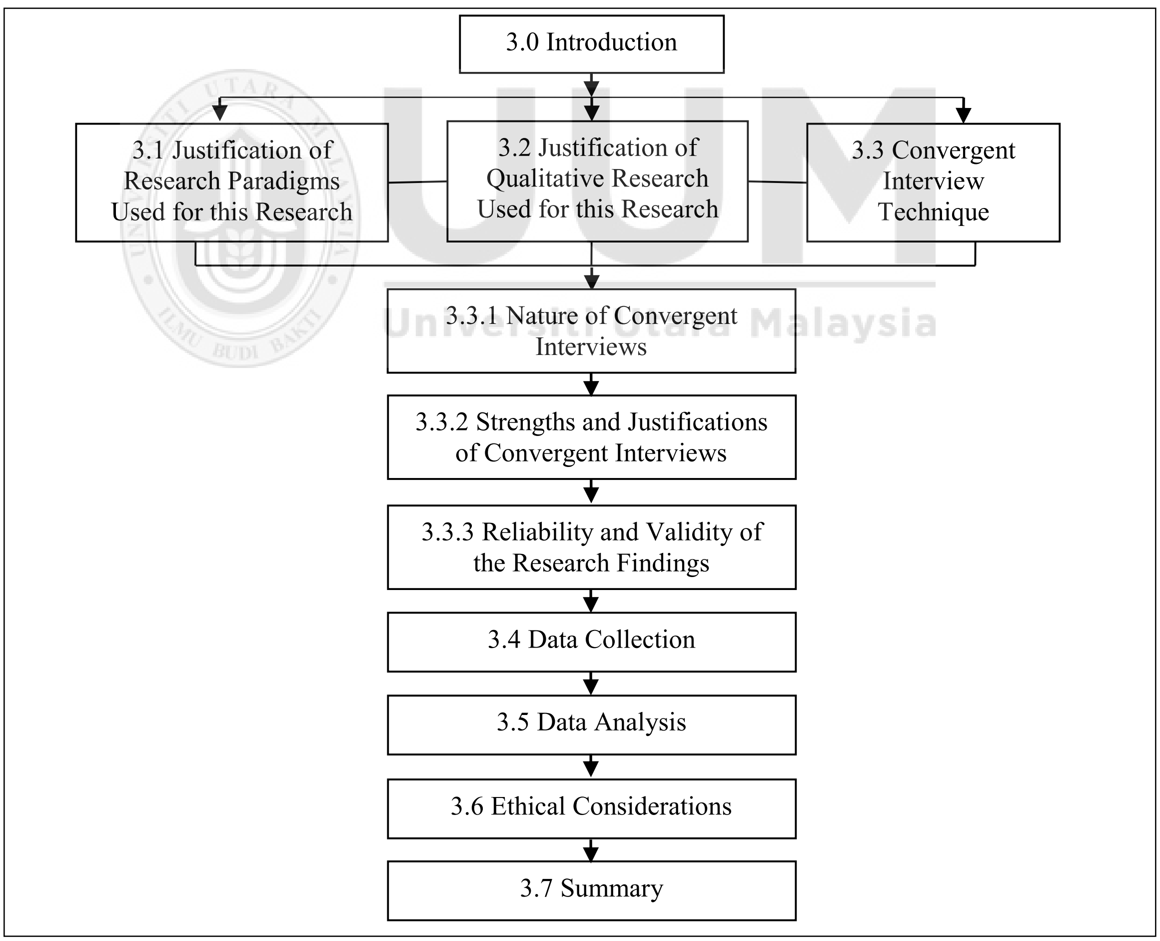


Figure 3.1
The Organization of Chapter 3
Source: developed for this research

This chapter 3 consists of total eight sections along with their subsections as shown in the flow chart in figure 3.1 above. The general introduction of this chapter is discussed in section 3.0. Section 3.1 justifies the research paradigms used for this research. Similarly, section 3.2 justifies the qualitative research approach used for this research. Section 3.3 discusses the convergent interviews technique followed by data collection in section 3.4. Moreover, section 3.5 discussed the data analysis of this research. The ethical considerations and summary of overall research methodology are discussed in section 3.6 and 3.7 respectively.

3.1 Justification of Research Paradigms Used for this Research

The previous section provided the flow of chapter 3. The development of knowledge and its nature is based on a research philosophy. There are four main pillars of research philosophy, which are also known as research paradigms. The selection of research paradigm was the first step of research design, which was the most appropriate for this research as discussed in the current section. There are four major paradigms of scientific research including positivism, constructivism, critical theory and realism. After reviewing and evaluating the major paradigms, realism was considered appropriate and used for this research. Before going to explain the research paradigms, it was necessary to define and understand what scientific paradigm is.

Scientific Paradigm. The scientific paradigm has been defined by many researchers as synthesised by this research in table 3.1.

Table 3.1
Definitions of Scientific Paradigm

Sr. No.	Author	Definitions of Scientific Paradigm
1	Babbie (2004)	It is just like thought, which helps researchers with a path, how to look at life.
2	Guba & Lincoln (1994).	It is a fundamental faith that deals with the prime principles and gives directions to the researchers.
3	Kuhn (2012)	It is a framework of values, techniques and orientations, which are common among the specific community members.
4	Perry, Riege & Brown (1998)	It is a conceptual framework, which might be implicit or explicit and where researcher may work.

Source: developed for this research based on (Perry, Riege & Brown, 1998; Kuhn, 2012; Babbie, 2004; Guba & Lincoln, 1994).

This research produced the definition of scientific paradigm based on the synthesisation of definitions of four authors (Perry et al., 1998; Kuhn, 2012; Babbie, 2004; Guba & Lincoln, 1994). Therefore, this research defines scientific paradigm as;

> "*a thought, a fundamental faith, a framework of values, techniques and orientations and a conceptual framework that provides direction to the researcher about how to look at a phenomenon*"

The explanation of selecting the appropriate research paradigm used for this research is given below.

Research paradigms used in the world. Many paradigms exist in the world to lead the researchers. Different researchers divided inquiries in different paradigms such as phenomenology and positivist by Easterby-Smith, Thorpe and Lowe (1991), quantitative and qualitative paradigms by Bonoma (1985), interpretivist and rationalist paradigms by Symour and Rooke (1995) and deductive and inductive paradigms by Parkhe (1993). An extensive synopsis of many paradigms was given by Perrry et al. (1998) and Guba and Lincoln (1994). The classification of these paradigms was very effective to use in this research due to comprehensiveness and modernity (Master, 2000). There were some philosophical assumptions or characteristics, which helped the researcher while selecting research paradigms. These assumptions or characteristics included epistemology, ontology and methodology and these are explained individually as follows.

Ontology is the primary assumption about the ancient nature of reality and it asks about existence (Guba & Lincoln, 1994; Harif, Hoe & Chin, 2014; Harif & Hoe, 2016; Rashid & Harif, 2015). Key ontology questions concern whether or not there is a social reality that exists independently of human conceptions and interpretations and, closely related to this, whether there is a shared social reality or only multiple, context-specific ones. In very broad terms, social science has been shaped by two overarching ontological positions in relation to these issues-realism. Realism is based on the idea that there is an external reality which exists independently of people's belief about or understanding of it. In other words, there is a distinction between the way the world is an dthe meaning and interpretation of that world held by individuals.

In addition, epistemology is concerned with the process of knowing and answering the basic questions such as "what is the nature of relationship between the knower, would be knower and what can be known?" (Guba & Linkcoln,1994). Epistemology raises many questions including: 1. how reality can be known, 2. the relationship between the knower and what is known, 3. the characteristics, the principles, the assumptions that guide the process of knowing and the achievement of findings, and 4. the possibility of that process being shared and repeated by others in order to assess the quality of the research and the reliability of those findings. Unlike epistemology, epistemological reflection does not seek universality; it is neither a "normative" (Schmidt, 2001; Miller & Fredericks, 2002) nor a finished discipline. It makes up a persistent, creative activity that is renewed time and again. It shows the difficulties faced by researchers when the characteristics of what they intend to know are unprecedented, or else, they cannot be, in part or as a whole, registered, observed, or understood by existing theories and/or concepts nor by available methodological strategies (Vasilachis De Gialdino, 2007a).

Social sciences require that particular epistemological reflections are approached from characteristic theoretical developments and empirical research practice. Such reflections, that are present in scientists' practical activity, even though they may not be named as such, are closely linked with the elucidation of the paradigms in force in the production of every discipline. I define those paradigms as the "theoretical-methodological framework used by researchers to interpret social phenomena in the context of a given society" (Vasilachis De Gialdino, 1992a).

Furthermore, methodology decides how the investigator would find out anything which he thinks to be known (Easterby-Smith et al., 1991). The epistemological and ontological belief of a paradigm was reflected by the methodology selected.

Four research paradigms were taken to explain for this research as shown in the table 3.2. These four paradigms included positivism, constructivism, critical theory and realism (Perry et al., 1998).

Positivism. Positivism is the first paradigm, which refers to a belief in a sole and external truth and it demands theoretical intentions to be tested empirically and consider whether these intentions are accurate (Manning, 1997). In positivism approach, the role of a researcher is value free and he attempts to seek a cause-effect relationship, which is rationally taken from a probable causal law (Neuman, 1997). According to the ontology of positivism, science has the ability to realize the correct nature of a reality (row 1, column 3 in table, 3.2) (Perry, Alizadeh & Riege, 1997). The reliable knowledge can only be achieved by 'which is observable' or by the 'instances of pattern of sensation' (Perry 1998; Lincoln & Guba, 1985). The positivists are concerned with the verification of a theory by testing the prepositions in positivism scientific paradigm (Hunt, 1993). The positivists are not concerned with the development and discovery of theory, which was the main concern of this research.

Table 3.2
Fundamentals of Inquiry Paradigms (Research Philosophies)

Elements / Paradigms	Epistemology	Ontology	Methodology	Relationship between issue and researcher	Respondent's perspective	Information's perspective	Data collection	Type of data gathered
Positivism	valid and reliable instruments to undercover the principles	hidden laws, look after learning and teaching process	Quantitative	separate	focuses on outsiders and away from data	diverge from specific to question	result and confirmation oriented	statistical and replicable
Constructivism	uncover the basic meaning of activities and events	reality is created by singles in a group	Qualitative	mutual relationship	focuses on insiders	extended	action or system oriented	non-statistical and sample related
Critical Theory	help to unearth the inequalities or injustice	society is widespread with injustice	civil actions and ideological review	mutual relationship	focuses on outsiders and nearest to data	extended	result and critique	non-statistical and sample related
Realism	a method that solves problem, is the best one	what is useful, is truth	Qualitative	mutual relationship	focus on insiders and part of research process	extended	System or explore oriented	Non-statistical, contextual and information rich

Source: modified based on Mohd Harif (2002) from the Synthesisation of (Zanetti, 1997; Perry, Alizadeh & Riege, 1997; Julnes & Mark, 1998; Bonoma, 1985; Riege, 1997; Neuman, 1997; Perry & Coote, 1994; Jonsson, Linell & Saljo, 1991; Orlikowski & Baroudim, 1991; Deshpande, 1983; Batonda, 1998; Healey & Perry, 2000; Hunt, 1991; Guba & Lincoln, 1994)

Epistemology is the second assumption where the inquirer is away from research process and he looks it by a one way mirror due to which his or her findings are theory free and value free as shown in table 3.2 (row 1, column 2) (Hunt, 1993; Guba & Lincoln, 1994). In turn, from methodological perspective, the positivists objective is to analyze and measure the cause and effect relationship between variables in order to highlight the causal law by formulating closed systems (row1, column 4 in table 3.2) (Tsoukas, 1989). The researcher has used quantitative data collection such as surveys and experiments if he has adopted positivism approach for this research.

There were three reasons for not using positivism paradigm for this research. Firstly, the current research showed a pre-paradigmatic body of knowledge, which focused on inductive theory building. Therefore, it was inappropriate to use positivism for this research because it focused on deductive theory testing (Master, 2000). In the literature, the usage of financial derivatives was widely discussed but it was not explained extensively in the context of SMEs in Pakistan. Thus, there was an absence of theory relevant to this topic allowing for theory testing in positivism. Somewhat, this research required theory building. In conclusion, this research did not deal with the context of justification but with the context of discovery that’s why positivism paradigm was not suitable for this research.

Secondly, the purpose of this research was to explore the determinants of using financial derivatives in SME businesses rather than to formulate a cause and effect relationship, which was objective in positivism context (Healey & Perry, 2000). Therefore, it was inappropriate to use positivist paradigm for this research. Thirdly, it was inappropriate to use positivist paradigm for this research because the process of the study of the usage of financial derivatives in SME businesses in controlled environment was not possible (Guba & Lincoln, 1994).

Thus, the process of the usage of financial derivatives in SME businesses was a function of various unknown and known factors influencing the decision and action of SME businesses to use financial derivatives, which was not controlled and isolated for the purposes of this research. The controlled environment restricts the findings due to lack of severity and do not exist in the real world (Seymour & Rooke, 1995). In short, positivist research paradigm was not appropriate for this research.

Constructivism. In constructivism research paradigm, reality about a supposition is formulated on the basis of belief system, which exists in a specific context as shown in table 2.3 (row 2, column 2) (Perry et al., 1997). In addition, truth is based on individuals' perceptions regarding reality and it is subjective in nature and its outcome holds multiple realities (Hunt, 1993). Therefore, the phrase 'perception in reality' is enough to summarize constructivism paradigm (Hirschman, 1986).

Furthermore, the interaction between reality and researcher or inquirer is subjectivist according to the epistemology of constructivism paradigm (row 2, column 2 in table 3.2). In the methodology of constructivism paradigm, respondent utilizes his or her experience to formulate a relevant stuff for this research and inquirer or researcher supports respondent by comments, suggestions and leading questions as shown in table 3.2 (row 2, column 3) (Jonsson et al., 1991).

On the contrary, in constructivism paradigm, in-depth interviews are used that' why this paradigm is not appropriate for this research as this research intended to use convergent interviews. Even, respondents and inquirers were linked interactively and researchers trust can influence the phenomenon or research inquiry (Sobh & Perry, 2006). In addition to epistemology, ontology and methodology assumptions, there were some other dimensions, which make constructivism inappropriate for this research as shown in the table 3.3.

Table 3.3
Other dimensions, which make constructivism paradigm inappropriate for this research

	Relationship	**Respondents**	**Information**	**Data Collection**	**Data Type**
Constructivism	Mutual	Focus	Extensive	Systematic	Non-Statistic
In-depth interviews	• Interviewer • Interviewee	• Insiders	• Rich • Deep	• Process • Construction	• Sample specific

Source: developed for this research

Critical theory. Critical theory paradigm is the third scientific research paradigm, which refers to social realities that are explicit and have historically formulated configurations as shown in the table 3.2 (row 3, column 3) (Healey & Perry, 2000). Critical theory gives attention to the transformation and analysis of cultural, social, ethnic, economic and political values (Perry et al., 1997). There is an interactive link between the subject matter to be explored and the researcher based on epistemology assumption. The inquirer inevitably pursues the subject matter being investigated by his or her morals (row 3, column 2 in table 3.2). The interpretive capacity of scholar is the main research tool that is normally influenced by the scholar's authority and expertise to renovate misconception and ignorance in notified realization as explained in constructivism research paradigm (Guba & Lincoln, 1994).

Therefore, this research paradigm was not appropriate for this research that using in-depth interviews and convergent interviews based on the methodology assumption as shown in table 3.2 (row 3, column 4). In in-depth interviews and convergent interviews, the specific interviews were conducted from the experts rather than group of people like in action research. The second reason of its inappropriateness for this research was the data collection process. In critical theory approach, group of people observe a phenomenon while in in-depth interviews and convergent interviews, individual interviewees share their knowledge based on their expertise and experience.

Realism. It is the last research paradigm, which was appropriate for convergent interviews research, which was one of the methodologies used for this research as shown in table 3.2 (row 4, column 2). Post positivism and critical realism are the other names of realism (Sobh & Perry, 2006). It is assumed to be external and real and it is related to the real world, which has actual presence (Perry et al., 1997). The reality of realism can be understood faulty. It exists, but it is complex to observe and inquirer can observe it in parts (row 4, column 2 in table 3.2) (Guba & Lincoln, 1994). This paradigm focuses on triangulation of many perceptions to capture the reality of the subject matter so that an objective account of an event can be achieved (Rashid & Harif, 2015; Harif, Hoe & Chin, 2014).

According to epistemology assumption for this research paradigm, the perceptions of reality are interceded by what an inquirer gets to the experiences of perception while being known that reality exists separate from human formulations and all these things are acknowledged by the researcher of realism as shown in table 3.2 (row 4, column 2) (Perry et al., 1997: Sobh & Perry, 2006; Harif et al., 2014). Thus, in this research, the researcher was neither critical theorist who was passionately engaged in the outcomes of this research nor he was objective such as positivist who was separated from the research but was interactive link with the participant like constructivists (Perry et al., 1997).

Therefore, convergent interviews were more appropriate for such type of research (row 4, column 3 in table 3.2) (Sobh & Perry, 2006). In addition to epistemology, ontology and methodology assumptions, there were some other dimensions, which made realism paradigm appropriate for this research as shown in the table 3.4.

Table 3.4
Other dimensions, which make realism paradigm appropriate for this research

	Relationship	**Respondents**	**Information**	**Data Collection**	**Data Type**
Realism	Mutual	Focus	Extensive	Systematic	Non-Statistic
Convergent Interviews	• Interviewer • Interviewee	• Insiders • Research itself	• Rich • Deep	• Discovery • Process	• Contextual • Exploratory

Source: developed for this research

In summary, from the above discussion of four scientific research paradigms, only one research paradigm namely realism was selected and three research paradigms including positivism, constructivism and critical theory were rejected for this research. Realism paradigm was considered appropriate for this research based on the truth, which was useful, solved the problem and used convergent interviews as its data collection technique.

On the contrary, positivism was not considered appropriate for this research because it is quantitative in nature, uses statistics, tests the existing theories and uses secondary data for analysis. Furthermore, only one thing which made constructivism paradigm inappropriate for this was method of data collection. In-depth interviews are used in constructivism paradigm. In addition to positivism and constructivism, critical theory was also not appropriate for this research because it unearths the inequalities, reality is created by group, uses an action research and does critique. Therefore, realism was the most suitable paradigm for this research.

3.2 Justification of Qualitative Approach used for this Research

In the previous section, justifications of using appropriate research paradigms for this research were discussed. The current section provided the justification of qualitative approach used for this research. Moreover, it explained the rationale why qualitative research approach was suitable for this research. There are two main types of research approaches including qualitative and quantitative approaches, which have their own distinctive purposes and characteristics (Easterby-Smith et al., 1991).

Quantitative versus Qualitative approaches. The qualitative approach has the key characteristics of interpreting and understanding the social action (Johnson & Christensen, 2016). There were eight (8) factors, which differentiated the two (2) research approaches as shown in the synthesised table 3.5.

Table 3.5
Synthesisation of Comparison between Qualitative and Quantitative Research

	Dimension	Quantitative	Qualitative
1	Nature of phenomenon	computations and measures of objects	related to the explanations , definitions, concepts, metaphors, interpretations and signs of different things including what, where, how, and when
2	Purpose	to assess the data and discern the findings to the population of subject matter based on the sample	to provides the qualitative understanding of the primary logics
3	Context	to anticipate the inaccurate effected findings by controlled settings	to execute in natural environment
4	Direction	providesthe answers to the questions related to how and what and their extent.	makes sure the human involvement to understand the life experiences of people in a systematic way
5	Relation with respondents	provides a little option to change basic decisions based on prior outcomes	provides space for alteration as the research continues by the interaction with the participants
6	Analysis	provides the statistical summary	has subjective and interpretive nature of analysis
7	Sample	uses large sample size	uses small sample size
8	Data collection type	uses solid and changeable data	uses actual and rich data

Source: modified based on Mohd Harif (2002) from (Guba & Lincoln, 1994; Easterby-Smith et al., 1991; Perry et a., 1998; Neuman, 1997).

Nature of phenomenon was the first dimension used to evaluate the difference between qualitative and quantitative approach for this research as shown in the synthesised table 3.5 (row 1, column 2). This qualitative research was concerned with the explanations, definitions, concepts, metaphors and interpretations. Moreover, this qualitative research was related to give the answer of what, when, how and where of the subject matter (Neuman, 1997; Perry et al., 1998; Guba & Lincoln, 199; Rashid & Harif, 2015). On the contrary, computations and measures of objects were referred by the quantitative research (Easterby-Smith et al., 1991).

The second dimension to differentiate qualitative and quantitative approach for this research was *purpose* (row 2, column 2 in table 3.5). The purpose of this qualitative research was to explore information from the interviewees' perspective regarding the research phenomenon including attitudes and behaviors of the respondents, which were not observable directly. In contrast with quantitative methods, it allowed to explore in-depth and flexible information from a small number of interviewees in less-structured pattern (Goba & Lincoln, 1994; Harif & Hoe, 2016).

Next difference between quantitative and qualitative approach for this research was *context* as shown in the synthesised table 3.5 (row 3, column 2). This research, which was qualitative in nature and done in natural environment despite of controlled or rigid setting in order to avoid findings being influenced inaccurately (Guba & Lincoln, 1994; Galtung, 1969). For instance this research used one qualitative methodology using convergent interviews.

The *direction* of the research was the fourth differentiating factor for this research as shown in the synthesised table 3.5 (row 4, column 2). The researchers using qualitative approach engaged the humans by two methods namely humanistic and interactive to systematically understand their life experiences (Bonoma, 1985). Therefore, the qualitative research given the answers to the questions, what was happening there? On the other hand, quantitative research gives the answers to the questions like how often, what level and how many (Zikmund, Babin, Carr & Griffin, 2013; Harif et al., 2014).

The number fifth differentiating factor between quantitative and qualitative research for this research was *relation with the respondents* (row 5, column 2 in table 3.5). This qualitative research provided space for alteration as the research continued and it increased by maximum interaction with the participants. On the contrary, quantitative research provides a little option to change primary decisions based on prior outcomes (Bonoma, 1985; Bacharach, 1989).

Next, the sixth difference between quantitative and qualitative research for this research was *analysis* as shown in the synthesised table 3.5 (row 6, column 2). This qualitative research was subjective and interpretive nature of analysis and it did not quantify the data analysis (McDaniel & Gates, 1991). On the other hand, quantitative research provides the statistical summary by quantifying the data (Davies & Hughes, 2014).

Another difference between qualitative and quantitative research for this research was *sample size* (row 7, column 2 in table 3.5). The small sample was used in qualitative marketing research. Furthermore, the number of respondents in marketing qualitative research sometimes reached to sixty (60) (Ryan & Bernard, 2000). Moreover, in small sample the number of respondents fell between fifteen to forty respondents (Morse, 1994). On the other hand, a large sample size is used in quantitative research methods.

The last dimension of difference between qualitative and quantitative research for this research was *data collection type* as synthesised in table 3.5 (row 8, column 2). Social sciences researchers were popular due to their positivist thinking, which were based on deductive approach (Perry & Pyatt, 1995; Bonoma, 1985; Zikmund et al., 2013). On the other hand, recently researcher adopted inductive theory building methodology (Perry & Pyatt, 1995). These research methodologies were suitable where information was obtained by engaging maximum people (Easterby-Smith et al., 1991; Zikmund et al., 2013). On the contrary, quantitative research approach did not consider the complexity of control settings (Morgan & Smircich, 1980).

In conclusion, the comparison of quantitative and qualitative research approaches for this research done based on eight (8) differentiating points and found that this research was qualitative in nature.

Justification of qualitative approach used for this research. After summarizing the above discussion, it was concluded that there were three (3) reasons due to which qualitative research methodology was used in this research. The objective of the research was the first and foremost reason to use qualitative approach in this research. This research was interested to investigate the low researched area of what were the determinants for the SME businesses in Pakistan to use financial derivatives. Qualitative research approach deals with theory building and quantitative research addresses theory testing. Thus, this research was dealing with theory association despite of theory testing. Qualitative approach like this research was used where the phenomenon was unknown and uncertain findings occurred when premature quantitative research method was used (Parkhe, 1993; Harif & Hoe, 2016).

The type of information required was the second reason for this research. It was difficult to understand complex phenomenon without using detail and in-depth qualitative data, which was achieved by bringing psychologically close to the subject matter under study. Thus, it was concluded that the closer the researcher was, the clearer it was to understand the phenomenon (Carson & Coviello, 1996). A researcher can get detailed understanding and motivations of underlying reasons by using qualitative research only. In this qualitative research, non-statistical analysis was used by collecting actual and rich information (Guba & Lincoln, 1994; Rashid & Harif, 2015).

Sample size was the final reason of using qualitative approach for this research. Government of Pakistan supports SMEs because these contribute up-to 30% in the GDP of Pakistan. Small and Medium Enterprises Development Authority (SMEDA) was developed by the government of Pakistan to overcome problems faced by SMEs (MPDR, 2014). A large number of SMEs in Pakistan are working, a small sample was used based on convenience sampling to gather data as qualitative methodology required in the marketing area (De Rutyer & Scholl, 1998; Rashid and Harif, 2015).

In conclusion, the researcher was able to obtain a space in the complex process of formulating a new trend of using financial derivatives within SME businesses in Pakistan, which was only possible by using qualitative methodology in this research. It was suitable for this research to use convergent interview methodology.

3.3 Using Convergent Interview Technique

The previous section explained the justification of using qualitative research. This section discusses the convergent interview technique and significantly justifies about why such technique is chosen as an effective instrument for the data collection of the proposed research. In literature, few data collection techniques for qualitative research like the convergent interviews, focus groups and in-depth interviews were found that were utilized by different researchers to reduce the uncertainty and redefine the research issues about the topic of research (King, Keohane & Verba, 1994). It was essentially considered and reviewed each of these methods before the selection of final decision on convergent interviews.

The data collection method based on focused groups was considered as the deliberate discussion designed for getting the perceptions on a defined interest area in a non-threatening and permissive environment. However, the focused group's results could cause biasness because of the influencing factors and peer pressure. It was because the members of in-groups may hide their thoughts and degrade their thinking power (Aaker & Day, 1990; Harif & Hoe, 2016). Other challenge related to focus group was facing difficulty to gather all relevant experts from various distinctive industries and locations to attend the sessions of focused groups at the same time slot and room because of the conflicts within the work schedule. Because of the above two mentioned issues, it was believed that method of focused group was not much appropriate for this research.

Further, in-depth interviews were conversation with the individuals that were usually conducted by the trained staff. It usually aided for collecting the particular information about an individual person. But the weakness in in-depth interviews method was that it did not have the way to analyze structured data, which made it less useful in the exploratory research (Batonda, 1998; Rashid & Harif, 2015).

3.3.1 The nature of convergent interviews

Current subsection describes the nature of convergent interviews. The convergent interview is a kind of procedural interview that is significantly characterized by an unstructured content and structured process (Dick, 2016). The convergent interviews provide the ability for refining the interview process & content and can extensively exhibit the broad issues of relevant research (Rao & Perry, 2003). This made convergent interview as the data collection solution for this research, therefore researcher intended to select it.

In general, the convergent interview method was a useful tool for enriching the information and provided the technique for interactive interviews for analyzing, collecting and relatively interpreting the large interviews data that were less researched and established study area (Riege & Nair, 2004).

Furthermore, it was also believed that the convergent interviews develop the qualitative technique for addressing the topic of research having the absence of theoretical underpinning (Dick, 1990). It was a popular qualitative research approach for providing a reliable, valid and rigorous data collection process (Harif & Hoe, 2016). The convergent interviews also exhibited an efficient way for collecting qualitative information related to the beliefs and attitudes of people through the interviews (Dick, 1990). The fundamental convergent interviews included two interlinked processes that were iteration or cyclic and data driven (Dick, 2016). Data analysis and interview process being the interlinked processes was exhibited in figure. 3.2.

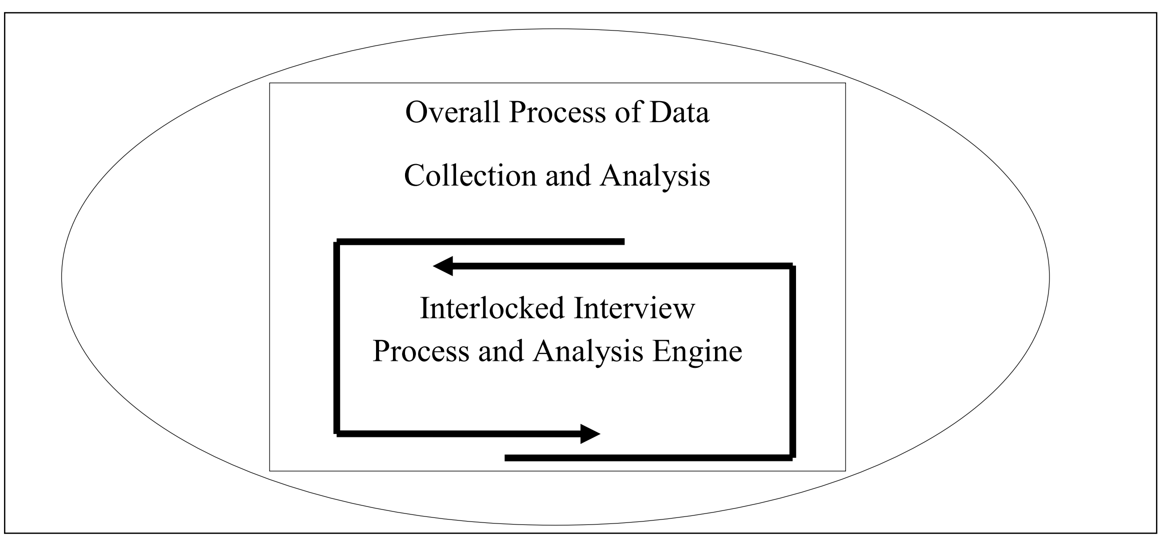


Figure 3.2
Interlocked Process of Convergent Interviews

Source: modified based on Harif & Hoe (2016) from Dick (2012) for this research

Alternatively, the data collection changed the data interview analysis within a tight cycle. In conclusion, the convergent interviews were reflected as an appropriate methodology than the focus groups and in-depth interviews. Because of this, this research used the convergent interviews for discovering the determinants of the usage of the financial derivatives within SME businesses in Pakistan. The convergent interview process is extensively analyzed in the next sections.

The convergent interview process. The previous subsection discussed the nature of convergent interviews including characteristics and justifications about the utilization of data collection technique. For further elaboration, convergent interview process starts the description about the convergent interview process in this section.

The convergent interview process is well structured but at the beginning it contains relatively unstructured content (Dick, 2016; Carson, Gilmore, Perry & Gronhaug, 2001). It is exhibited that the process has two major phases of planning and execution of the plan as shown in figure 3.3. The planning phase contains the target population, sample selection and the preparation of interview session, which was exhibited later in detail. The execution phase contains conducting interview, transcribing and summarizing the collected interviews' information, revising and reviewing of the process for the improvement of adequate interviews. The steps of convergent interview process are shown in figure 3.3.

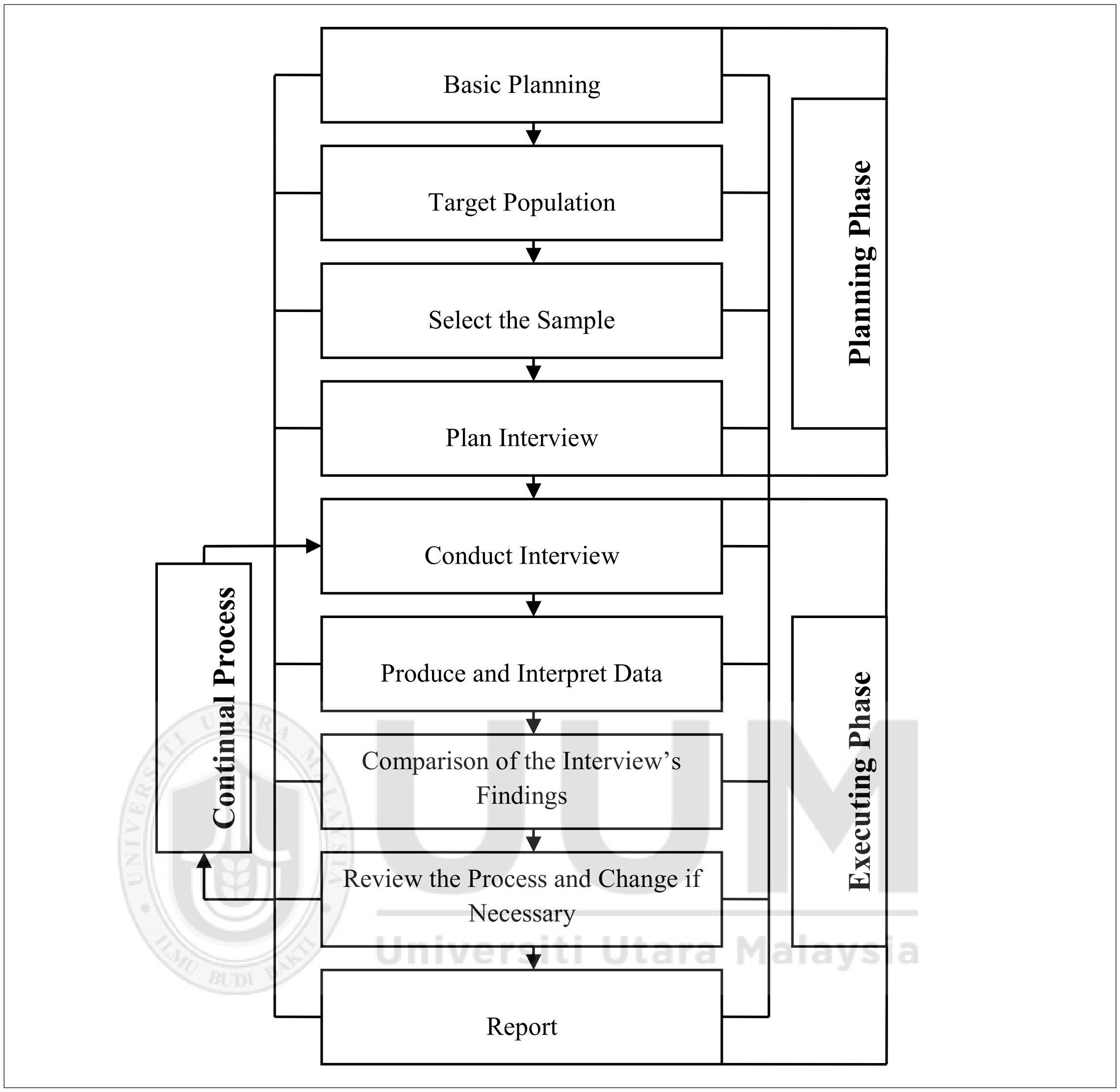


Figure 3.3
Steps of Convergent Interview and Continual Process

Source: developed based on Dick (1998), Mohd Harif (2002), Harif and Hoe (2016), Rashid and Harif (2015)

The convergent interview takes on semi-structured interview questions methodology, which combines key benefits of both structured and unstructured interviews' approaches (Dick, 1998). It focuses on interviewers for developing some of the data interpretation, which can be used for refining and focusing the process and content of the subsequent interviews (Mohd Harif, 2002). This process was essential to undertake every interview as shown in figure 3.4.

The data collection and analysis process is iterative and on-going during the phase of execution until interviewing all identified participants occurs. The technique of convergent interview usually permits the refinement of both responses and questions over a successive approximants and service of interviews (Woodward, 1997; Dick, 1990). Such approximants occur because every interview is considered as a complete research design process, data collection, analysis and interpretation and redesigning of the research (Dick, 1990). At the completion of the interview process, the result provides the research findings.

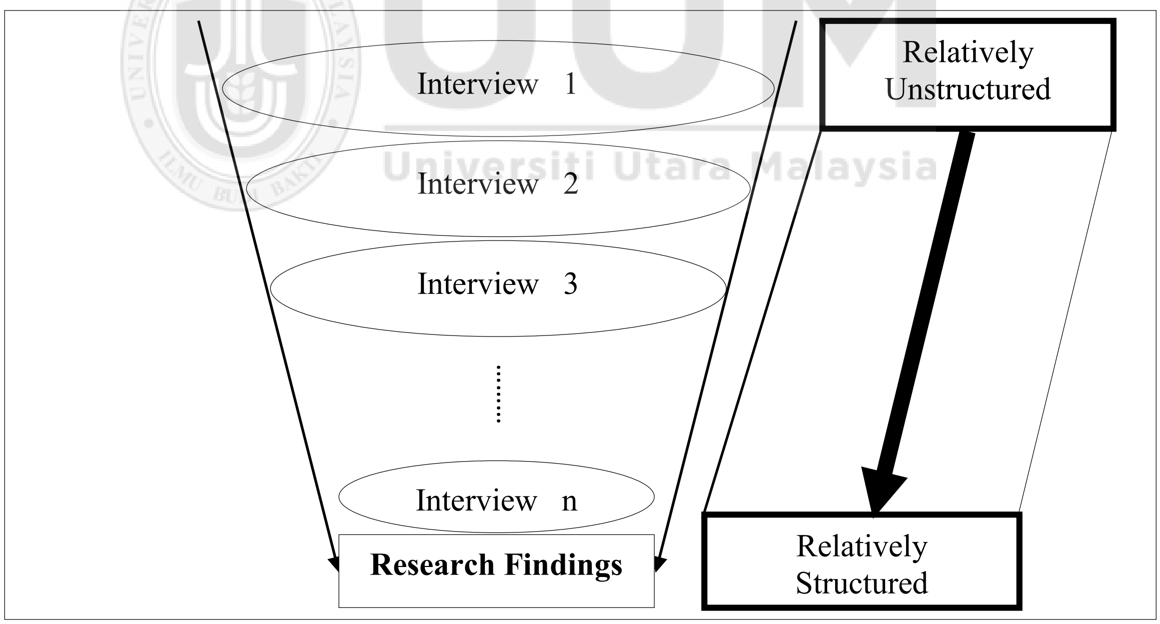


Figure 3.4
Convergent Interview Approach

Source: developed for this research based on Woodward (1997)

This section effectively reviewed the convergent interview process that is on-going and iterative. It also exhibited that although the interview content is relatively unstructured during its initialization, but gradually it becomes structured and strongly emphasizes on interviews progresses till the last interviewee. The convergent interviews' nature provides the rigorousness for the data collection.

3.3.2 Strengths and Justifications of Using Convergent Interview

The convergent interview along with its process is explained in subsection above. The objective of this subsection is to describe the strengths and justifications for using convergent interviews in this research. There are four convergent interviews' strengths that justified and supported its utilization for this research. First, it can significantly aid for improving the credibility of the qualitative findings (Dick, 1998). Secondly, it allows the relative structured approach for categorizing about what essentially needs to be incorporated within its reach in an initializing stage (Harif, Hoe, Hussain, Mohd Isa, Othman & Din, 2011; Harif & Hoe, 2016; Rashid & Harif, 2015). Thirdly, it is data driven and emergent approach that provides a reliable, valid and rigorous data collection process (Harif & Hoe, 2016; Dick, 2016). Lastly, it permits the researchers deep data collection than several other interview types as they make effort to gain insight into the understanding of informant situations.

Further, the techniques of convergent interviews have strengths that provided three justifications to the researcher to use convergent interviews for this research. First justification behind the research was to search for the determinants of the usage of the financial derivatives. It was because of the uncertainty of the determinants at the present stage, which made convergent technique as the most valuable technique for the adaptation of this research (Dick, 1998). Second justification exhibited convergent interview technique as an effective solution for the utilization of limited interviews with the experts, this converged as the most frequent issue. Third justification, which was also recommended by Dick (1998), emphasized on the convergent interview technique. It was quite useful and helpful when deciding about what question to be asked within the survey for the relevant data collection. Therefore, the above perspectives exhibited to make us concluded that the convergent interviews were much appropriate solution for the data collection of this research.

Limitations of convergent interviews. The limitations of convergent interviews technique are discussed in this section. Five (5) limitations of convergent interviews were found from the literature. These limitations included level of knowledge and skills of interviewer to conduct an interview, level of knowledge of interviewees about the research of subject matter, it cannot be utilized as the standalone solution for the establishment of research findings, validity increases the time and cost when the unstructured process and content occurs and it shares few weaknesses with various other interview techniques.

In conclusion, after observing the limitations of the convergent interviews technique, it was sure that the benefits of this technique outweigh the limitations, which could be minimized. The next section elaborates how the validity and reliability is established and how the convergent interview technique is implemented that could lessen the drawbacks.

3.3.3 Developing the Reliability and Validity of the Research Findings

The previous subsection elaborated the convergent interview approach for this research while this subsection explains the validity and reliability issues of this research. The validity and reliability issue is much vital and usually cannot be ignored in convergent interview and qualitative research without having any exception (William & Lewis, 2005).The validity and reliability provide effective examination about the fitness of measure, which is reflected as essential element for addressing the research. Both reliability and validity depend upon the quality of research design.

The validity and reliability concept lies within the qualitative research, which considerably provides the consideration for process that contains the designing of a study, its analysis and quality judgment (Patton, 2002). It is found that there exist two distinct ideologies about the validity and reliability concept in qualitative research. The proponents stated that these concepts are much relevant and can significantly aid for establishing the qualitative research (Patton, 2005; Yin, 2013; Easterby-Smith et al., 1991; Miles, 1994; Rashid & Harif, 2015). On the contrary, it is also believed that the validity and reliability concept is misleading and has no relevance within the qualitative research (Stenbacka, 2001). In spite of such arguments on irrelevancy, it is further realized that there is a necessity for qualifying measurement and checking of research (Stenbacka, 2001; Creswell & Miller, 2000; Harif & Hoe, 2016). Therefore, the comprehensive tests for reliability and validity of convergent interviews for this research are synthesised in table 3.6.

Table 3.6
Comprehensive Tests for Reliability and Validity of Convergent Interviews used for This Research

Types of Tests	Interview Approaches Phases	Approaches Used to Attain Validity and Reliability
Reliability	Research design	➢ Interviews administration by structured process
	Data collection process	➢ Record, write and interpret the data by structured process
Constructs Validity	Research design	➢ Modification of interview questions
	Data collection	➢ Flexibility of interview protocol
Internal Validity	Research design	➢ Obtain information richness
	Data collection	➢ Selecting various sample from the financial experts in SMEs businesses in Pakistan
External Validity	Data collection	➢ Select sample based on the respondents knowledge of financial derivatives
	Data analysis	➢ Use SME industry for the generalization of the results

Source: developed for this research based on Mohd Harif (2002).

Reliability. Reliability indicates the level to which a test, an experiment and any measurement procedure produces the same outcome on the repeated tests. In addition, if there are consistent convergent interview techniques the outcomes can be replicated (Sekaran, 2003; Emory & Cooper, 1991). The reliability of convergent interviews was attained by two different approaches in this research. In first approach, reliability was achieved by using structured interview administration process while conducting convergent interviews. In second approach, a structured process was planned to attain reliability, which included recording, writing and interpretation of data.

In addition, the convergent interview technique is a method with integral means of research rigor (Dick, 2016). A complete package of detailed and rigorous information came into view from interview to interview and was used in interview processes in this research. In the end, in this research the credibility of the research was improved by convergent interview technique (Dick, 2016).

Validity. There are three types of validity namely construct, internal and external validity that have been identified and deployed in the convergent interview techniques (Yin, 2013; Rao & Perry 2003). Practical approach to the subject matter or phenomenon is used for the development of construct validity, which is the first type of validity as shown in the synthesised table 3.6 (row 2, column 2-3). Moreover, the purpose of construct validity is to formulate an appropriate operational measure so that a concept could be investigated effectively (McDaniel & Gates, 1991). Construct validity of this research is obtained by two famous approaches namely triangulation of interview questions and flexibility of interview protocol. The purpose of triangulation was to enhance the trustworthiness and minimize the biasness. On the other hand, the aim of flexibility of interview protocol was to permit the interviewer to redesign and reevaluate the process and content of the interview program.

Internal validity is the second type of validity as shown in the synthesised table 3.6 (row 3, column 2-3). Internal validity indicates the causal relationship between variables (Zikmund et al., 2013; Sekaran, 2003). Generally, internal validity is used for causal and exploratory studies only but it could be utilized for sample selection as it helps for the validation of information richness (Yin, 2013; Patton, 2005). This research used internal validity for sample selection and information richness is obtained from the financial experts in their field in SME businesses in Pakistan.

The third type of validity is external validity as shown in the synthesised table 3.6 (row 4, column 2-3). It is used for the generalization of the findings of the research (Emory & Cooper, 1991). External validity in this research is obtained by sample selection, which is possible by theoretical replication (Yin, 2013). The selection of interviewees or respondents of this research was based on their knowledge relevant to the usage of financial derivatives in SME businesses in order to achieve cross-section opinion. In conclusion, it is explained in the above discussion how reliability and validity was attained by different research approaches and research design in this research.

3.4 Data Collection of this Research

The previous subsection explained the reliability and validity for this research finding. Current section discusses data collection process for this research. Data collection is decisive because it contributes to the best understanding of theoretical framework of the research (Ryan & Bernard, 2000). Data collection is said to explain data collection strategy, which starts from population, sample selection strategy and followed by sampling population. The sample size and research instrument are followed by sampling population. Later on, the convergent interview process, which includes interview protocol and structure of interview process are implemented.

Population. The first stage of data collection was to decide about the population of the research. Population of this research was the list of firms, which dealt in financial derivatives provided by the Securities and Exchange Commission of Pakistan (SECP). The purpose of taking population from the SECP was to make sure the trends of financial derivatives in medium size firms, which were using derivatives. A list of more than four thousand and two hundred firms has been provided by SECP of non-listed firms, which were medium size and somehow involved in financial derivatives. The unit of analysis of this research was included medium size manufacturing firms, which were involved in financial derivatives' usage. Therefore, Pakistan medium size firms from SECP are taken as population for this research.

Sampling approach: purposive and snowballing. Sampling approach or strategy explains how respondents of convergent interviews are identified and selected. It is pivotal strategy while conducting research because it increases the validity and efficiency of research; either it is quantitative or qualitative research (Palinkas, Horwitz, Hoagwood, Green, Wisdom & Duwan, 2013; Morse & Niehaus, 2009). The ultimate quality of research is profoundly influenced by sample selection particularly in qualitative research (Coyne, 1997). In the context of research, sample is the subset of population and sampling indicates the individuals' selection aiming of collecting information from them (Sekaran, 2003). The interviewees or respondents were sample of this research.

Many sampling techniques are available. In qualitative research, one of the widely used sampling strategies is purposive sampling because it selects and identifies the rich information relevant to the subject matter of interest (Palinkas et al., 2013; Rashid & Harif, 2015). In addition, rich information are those, which a researcher can use to learn about the issues of main importance to this research and that is only possible by purposive sampling (Patton, 2005).

The purpose of this qualitative research was to discover, explore and obtain in-depth understanding of the determinants of the usage of financial derivatives within SME businesses in Pakistan. The information related to the phenomenon of interest or subject matter was obtained from the financial experts in SME businesses. It showed that the sample was selected carefully with purpose in this research. Thus, this qualitative research deployed the purposive sampling technique. Moreover, this qualitative research used snowball sampling. A purposive snowballing technique resulted when the above described two sampling techniques were combined and this purposive snowball sampling technique was used in this research.

Snowball sampling has an advantage that one respondent refers the researcher to the other respondent, it saves the time and researcher has a good introduction for the next respondent. There might be a limited variation in the sample because of those respondents who are part of index cases network and this is the disadvantage of snowball sampling. It is necessary to have minimum two extra ways in the community to overcome the disadvantage of snowball sampling (Sekaran & Bougie, 2016).

The process of interview was carried out according to the process described in section 3.3.1. All the interviewees were selected by utilizing the snowballing sampling technique that was stipulated in section 3.3.1. It is important to mention the reasons of using snowballing sampling technique. The first reason was related to sampling method. Snowball sampling technique is the most useful method to find interviewee from the hard to reach population. The interviewees participated in this research were Chief Financial Officer (CFOs) holding higher position in SMEs, that' why they were taken as hard to reach population. They had busy schedules in order to manage their particular firm. It was a time constraint factor to participate in the interview. Their motivation to contribute opinions and experiences was based on their referral colleagues and friends.

Secondly, it was difficult to find the expert of the field or research topic while collecting data because current research investigated the determinants of the financial derivatives' usage from CFOs who held higher positions within SME businesses in Pakistan. Therefore, it was only possible to find interviewees by utilizing snowball sampling method for the reasons already explained in above sections.

The last reason for utilizing snowball sampling technique in this research was carried out based on perception, opinion and experience of the CFOs within SMEs in Pakistan.

Though, by nature, this research was explorative and snowball sampling technique was the most appropriate utilized for this research (Dragan & Issac-Manue, 2013; Hendricks, Blanken & Adriaans, 1992; Harif & Hoe, 2016). The process of snowball sampling used in this research is exhibited in figure 3.5. The process of interviewing stopped at the 19th interviewee according to the principle of saturation as explained in chapter 3 above. The whole interviewing process of nineteen (19) interviewees by using snowball sampling process is depicted in figure 3.5.

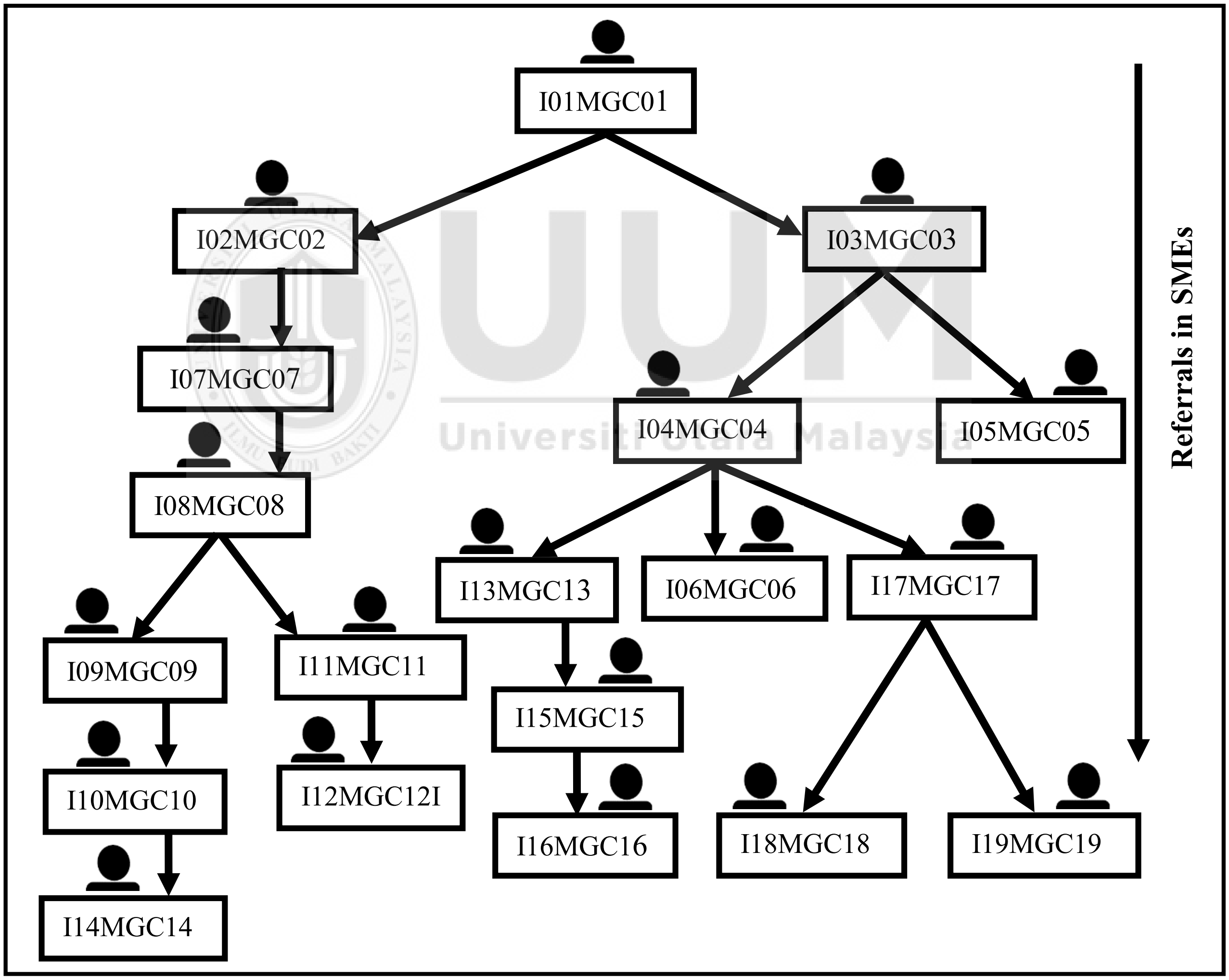


Figure 3.5
The Process of Snowballing Used in this Research

Source: developed for this research

This research faced three main challenges during data collection. First, it was difficult to get acceptance and cooperation from the particular person who was referred by the prior interviewee. Some of them were not interested to take part in this research as an interviewee due to confidentiality issues.

In addition, they declined interview invitation many times due to lack of interest. Secondly, time constraint was another challenge while scheduling interviews. Few incidents happened where interviews were rescheduled many times owing to unexpected situations. Even in few cases interviews were cancelled in total due to delay in the process of data collection. In the end, few interviewees were not fit to the criteria set for SMEs, which were referred by preceding interviewees.

Sampling Population. The sample of this research was taken from the pool of Chief Financial Officers (CFOs) from SME businesses, which were engaged with export and import operating in Pakistan, who made the financial decisions of the firms. In convergent interview technique as explained above, the first respondent was selected carefully from the firm. Furthermore, the first respondent was representative and he referred the researcher to other respondents who were expert in the area of the subject matter to be investigated by researcher (Riege, 2003; Dick 1990; Rashid & Harif, 2015).

This research selected first respondent, which was CFO of a medium size firm, which dealt in derivatives and involved in export and import activities in Lahore, which is the capital of Punjab because a lot of export and import related manufacturing SMEs have operations in this city.

Sample size. It is necessary to determine sample size in addition to sampling strategy. In qualitative research, there is no particular rule for sample size as compared to quantitative research (Patton, 2005). In qualitative research, sample size is determined based on different questions including objective of the research, what will be valuable, what will be reliable, what is at risk, what you want to investigate and what is possible to do with available resources and time (Patton, 1990). It is important to consider two main aspects namely variation in the target population and redundancy or saturation (Nastasi, 2004; Lincoln & Guba 1985).

Saturation point is accentuated in qualitative research to get comprehensive understanding of phenomenon by bringing more respondents constantly till the data set is complete and saturation comes when nothing new is added (Marshall, Cardon, Poddar & Fontenot, 2013; Miles & Huberman, 1994). Sample size should be adequately large because it is data driven. Normally sample size should consist of minimum twelve (12) respondents unless saturation happens (Dick, 1990; Rashid & Harif, 2015). In contrast to Dick (1990), sample size less than twelve (12) is also possible for stability (Riege, 2003). Therefore, this research determined sample size based on the saturation principle. Using snowball sampling technique more interviewees were added until an agreed stable pattern, saturation, and divergence on the determinants was obtained. Interviews were stopped when stability was reached, agreements about the previous interviewees' questions were achieved and disagreement was explained (Naire & Riege 1995; Harif & Hoe, 2016). The whole summary of data collection phase is comprehensively depicted in table 3.7.

Table 3.7
Summary of the Data Collection Phase

Data Collection Technique	**Convergent Interviewing Technique**
Population	CFOs in Pakistan SME businesses
Sample Selection	Purposive snowball sampling technique
Sample Size	The optimal sample size is determined when stability or saturation is reached.

Source: developed for this research

Research instrument. The population, sample selection technique and sample size are described above comprehensively. This section discusses the research instrument that was used in this research for data collection. This research used convergent interview protocol as its research instrument. An interview protocol was developed for this research to enforce the validity and reliability of the data collection process. The interview protocol of this research assisted the researcher to evaluate the questions asked during the interview sessions and also to group the interview questions based on the five research issues namely, the determinants of the financial derivatives' usage within SMEs, the financial core and non-core financial determinants and the core non-financial and non-core, non-financial determinants. Furthermore, it was to facilitate the data analysis stage later (Miles, Hubberman & Saldana, 2013; McPhail, 2003).

In addition, the interview protocol was comprised of a researcher's assurance to uphold confidentiality of the respondents and the adherence to ethical behaviour throughout the interval of the research project. The convergent interview protocol was contained a set of semi structured and pre-defined interview questions initially. All interviews were conducted in English. Various issues were decided before going for every next interview. The flow of interview protocol is shown in the figure 3.6.

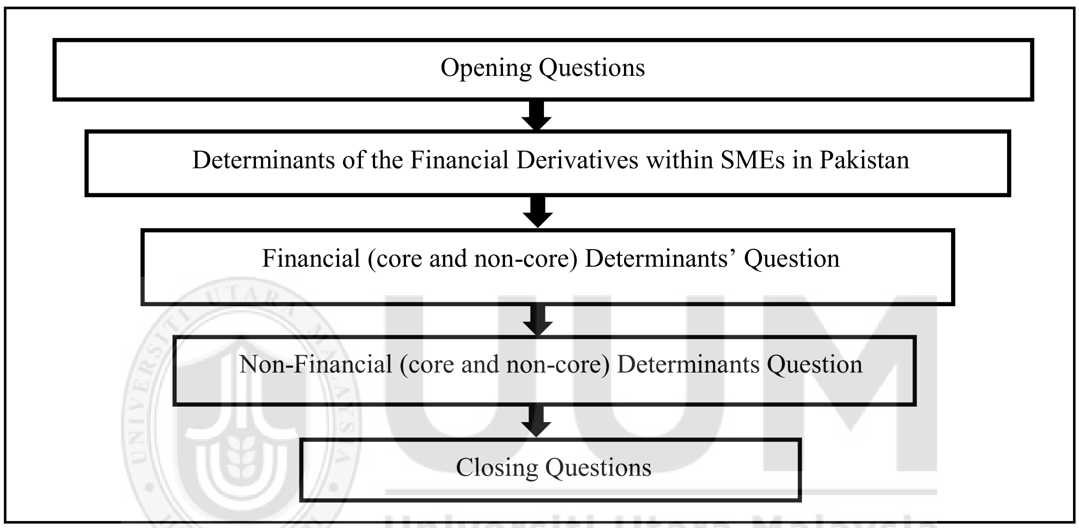


Figure 3.6
Flow of Interview Protocol

Source: developed for this research

There was a combination of open ended questions in interview protocol including opening questions, probe questions and ending questions. The opening questions were general and broad in nature. The probe questions were obtained by the convergence view on the usage of the determinants of the financial derivatives in SME businesses in Pakistan. The ending questions were asked about to summarize and request for the referral of next interviewee.

In summary, the interview protocol of this research consisted of five levels, namely (i) the opening questions; (ii) the question on the determinants of the financial derivatives' usage within SME businesses; (iii) the questions on financial (core and non-core) determinants; (iv) the question on non-financial (core and non-core) determinants and (v) the closing questions.

The original protocol was modified two times in order to cover all the aspects and make sure any ambiguity. All the questions from three sets of interview protocols were asked according to the five research issues. The summary of all questions according to research issues is given in the table 3.8.

Table 3.8
Summary of Questions Asked According to Research Issues

	Question numbers asked from three sets of interview protocols		
Sr. No	**Set 1**	**Set 2**	**Set 3**
Issue 1	Q3	Q 3	Q 3
Issue 2	Q 4	Q 5	Q 6
Issue 3	Q 5	Q 7	Q 8
Issue 4	Q 6	Q 9	Q 10
Issue 5	Q 7	Q 10	Q 11

Source: developed for this research.

The interview protocols of this research are presented in appendix 2, 3 and 4 respectively. During the interview, to facilitate an effective communication and to encourage the respondents to share their experiences and perception, an outline of the seven steps as cited in Rao and Perry (2003) and recommended by Dick (1990) was followed and presented in appendix 6. Furthermore, each of the interviews was noted, audio taped and transcribed. Recordings of the interviews were done to strengthen the accuracy of the data collection process. Moreover, it had allowed the researcher to replay the recordings that helped the researcher interpreted the data, identified important themes, corrected and expanded on the interview notes (Riege & Nair, 2004). The recorded interviews were coded as shown in figure 3.7.

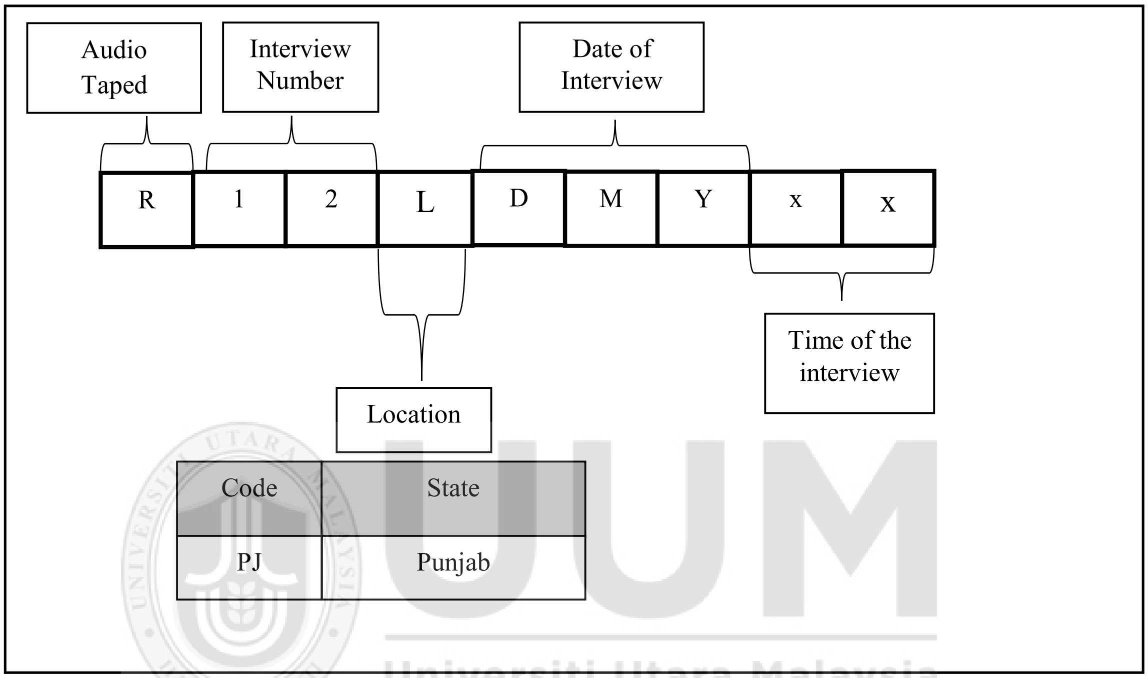
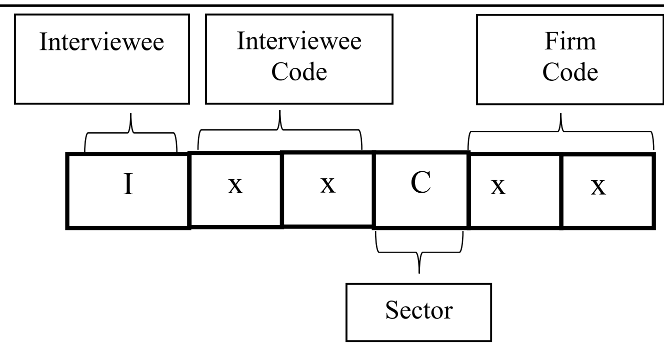


Figure 3.7
Labelling convention for taped recording of the interview

Source: developed for this research

The transcription of the interview was prepared immediately after each interview was completed and these transcribed data was then thoroughly analysed. Following is a brief explanation on the labelling convention for respondents used in this research. The real names of the respondents were disguised in order to maintain anonymity and each was identified based on the respondent code, sector in the SMEs and firm code. Their names were disguised and identified according to the labelling convention as shown in figure 3.8.



Code	Sector in SMEs
MG	Manufacturing sector

Figure 3.8
Labelling convention for Interviewees

Source: developed for this research

Implementation of convergent interviews. This section explains implementing convergent interviews as the primary data collection technique. The interview structure is the main thing, which needs to explain. Interview process is the part of data collection procedure, which started from the invitation by sending the invitation letter, mail and phone calls, whichever was suitable to the respondents or interviewees. The aim of invitation letter was to get the consent of the participant for face to face interview session. And consent form was signed from the interviewee (appendix 5). In majority cases, phone calls were used for the appointment of the interviewee. When interviewee accepted the invitation then the venue, date and time was decided to conduct the interview.

Interview process structure started after the acceptance from the interviewee. The structure of interview process in this research were consisted of five steps including introduction and rapport building, opening questions, probe questions, summary questions and closing, which has been suggested by Dick (2012). The first part of interview structure was introduction of the interviewee and rapport building. In introduction, interviewer briefed the interviewee about the purpose and background of the research and the possible duration of interview session. The purpose of giving introduction was to make free the interviewee from any disturbance during the whole interview session. Rapport was built while introducing the interviewee (Dick, 2016). In addition, interviewer explained the interviewee about the uses of data and ensured the confidentiality of interview. Interviewee was told about any audio, video and notes preparation. These questions were not the part of interview protocol.

The second step of structure of interview process was opening questions. The opening questions were asked to make the technique successful and these questions were content free, general and broad. The purpose of opening questions was to extract pertinent information without restricting the interviewee (Dick, 2016). A semi structured interview questions were formulated to collect data from interviewees by using convergent interview technique. The opening questions were open-ended in order to motivate interviewees to participate as long as possible and explain his or her views freely.

The third step of structure of interview process included probe questions. The probe questions were used to produce a convergence regarding a tested interpretation in this research. The specific questions were asked, which were prepared before conducting an interview. The semi structured questions were asked as well. Summarizing the questions was the fourth step of interview process. At this step, interviewer checked the precision of summarized key notes by asking questions for comments to make sure the interviewer understanding.

The final step of the structure of interview process was closing the interview. The interviewer appreciated the participation of interviewee for taking part in this research and giving time to interviewer. The interviewer availed the opportunity by seeking permission for meeting next time if required and interviewer requested for referrals as well.

3.5 Data Analysis

The previous section discussed the data collection strategy used for this research and this section discusses the data analysis procedure and interpretation of convergent interviews data. Data analysis consists of reviewing, categorizing, tabulating, and recombining evidence in order to ascertain the meanings relevant to the research's initial aim, objective, research questions and issues (Yin, 2013; Miles & Huberman, 2002). All of the data required for this research was derived from the primary data gathered during the process of conducting convergent interviews. It is very complex process to analyze data in qualitative research because the purpose is to take the true picture of the phenomenon (Casterle, Gastmans, Bryon & Denier, 2012). The researcher must engross the data to be fully aware about it and seek the themes and patterns for many relationships among data in order to understand what the researcher have, for analyzing the qualitative data. The data after analysis becomes information, which could be written up and displayed

(Kawulich, 2004). The steps of qualitative data analysis included processes such as organization of data, transcribing data, classifying data and categorization (Baqir & Palvia, 2009). After the completion of interview process for data collection, different approaches for data analysis were used. Thematic approach is very common, widely used and appropriate for qualitative data analysis (Boyatzis, 1998; Roulston, 2001; Rashid & Harif, 2015).

Thematic analysis. Thematic analysis technique is used to identify, analyze and report the themes or patterns within interview data collection (Braun & Clarke, 2006). This technique clearly organized and explained the collected data in detail. It also interpreted many facets of research phenomenon under study very frequently. The data collected by convergent interviews was managed manually instead of using any software. This technique had six phases while doing analysis, which were suggested by the researcher and were used in this research (Braun & Clarke, 2006; Harif & Hoe, 2016). These six phases included become familiar with the data, initial codes' generation, search themes, review themes, define and name the themes and generate the report, which are explained one by one below. Along with the process of thematic analysis approach, the similarities and differences were also found.

Becoming familiar with the data. Prior to this phase, all interviews were tape recorded. Notes were taken by the researcher during each interview and after each interview the collected data were transcribed. The transcription was reviewed for accuracy and it was returned to respective participant for amendment and approval. In this phase, the unit of analysis was decided (McCain, 1988; Cavanagh, 1997; Guthrie, Yongvanich, & Ricceri, 2004) including the theme, as well as the attempts to make sense of the data and to attain a sense of whole. In this first phase of thematic analysis researcher repeated reading of the data in an active way. Researcher searched for patterns, meanings and so on. The verbal data from all the interviews was transcribed into written forms and digital recording was played several times in order to translate in word document carefully. Actually, it was also a process about reading, reviewing, coding, interpreting and describing the whole data. It also involved in looking for themes, sub themes, description and interrelating themes. In order to make familiar with the data, transcribing process was an excellent way (Riessman, 2002). No doubt, it was very complex and difficult process; once transcribing were completed it was necessary to read many times before starting coding.

Generating Initial Codes. The process of generating codes started once data was familiarized. This phase was involved the generation of initial codes from the data. For qualitative data it was key element (Flick, 2014). This research organized data into meaningful groups as proposed by Tuckett (2005). The coding was performed to the transcribed data. The researcher examined the data to condense them into preliminary analytic categories or codes. This process helped to bring themes to the surface from deep inside the data (Neuman, 2006). The transcript was read thorough and as many headings as necessary were written down in the margins to describe all aspects of the content (Hsieh & Shannon, 2005).

Searching for Themes. This phase entailed sorting of diverse codes into possible themes and collating the related codes from the identified themes. The result of this phase was student themes collection. All extracts and sub themes of data were coded related to them. No code was abandoned as it was uncertain whether the themes held as they were or whether some codes were needed to be separated, refined, discarded and combined. The major themes of the research project were identified and ready for the third phase of the process. At this stage, it was important for the researcher to look selectively for cases that illustrate the themes and to make comparisons and contrasts about all of the data collected was completed (Neuman, 2006). During coding, the major themes or concepts ultimately guided the research.

Review Themes. This phase came after the candidate was developed themes, which refined the themes. Some themes were collapsed into each other and some were broken down into separate themes as appropriate. The main purpose of this phase was to get transparent and good idea of what different themes were and how these themes were fit to each other and the results enabled the researcher to understand the whole story of themes regarding data.

Defining and naming the themes. Those themes, which presented analysis were further defined and refined to analyze the data within them. It means this phase identified the importance of what each of them was about and was determining what aspect of each theme of the data was captured. The result of this step was clearly defined what the themes were and what they were not (Riege & Nair, 1995). The data was segregated into five categories of discussion: (a) the determinants of the financial derivatives' usage within Pakistan SME businesses: (b) the core financial determinants of the financial derivatives' usage within Pakistan SME businesses: (c) the non-core financial determinants of the financial derivatives' usage within Pakistan SME businesses: (d) the core non-financial determinants of the financial derivatives' usage within Pakistan SME businesses, and (e) the non-core non-financial determinants of the financial derivatives' usage within Pakistan SME businesses. These steps are attentively explained next.

Step 1: To identify the determinants of the financial derivatives' usage within Pakistan SME businesses.

The first step involved transferring all statements relating to the determinants of the financial derivatives' usage within Pakistan SME businesses stated in the copy of transcriptions and placed in the prepared matrices according to respondent codes. Respondent was contacted to assemble clarification and verification of the statements on the determinants, if necessary. Next, related statement from the first respondent was summarized. The researcher then compared the determinants mentioned by the first respondent with the statement mentioned by the second respondent, as well as for the other interview stages. Finally, results from all respondents were arranged and were listed according to the most mentioned factor to the least mentioned factor so as to determine the frequency of each factor.

Step 2: To identify the core financial determinants of the financial derivatives' usage within Pakistan SME businesses.

In this second step, all related statements to the core financial determinants of the financial derivatives' usage within Pakistan SME businesses were summarized and a matrix for the core financial determinants was formed and comparison was made for inputs from all interview stages.

Step 3: To identify the non-core financial determinants of the financial derivatives' usage within Pakistan SME businesses.

Similar to previous step, at first the researcher transferred all the related statements of the non-core financial determinants, as stated in the copy of transcriptions into the matrix according to the respondent codes. The statement verification was also sought after if needed. Next, all related statements were summarized and a matrix for the non-core financial determinants was formed and the comparison was made for inputs from all interview stages.

Step 4: To identify the core non-financial determinants of the financial derivatives' usage within Pakistan SME businesses.

In this fourth step, all related statements to the core non-financial determinants of the financial derivatives' usage within Pakistan SME businesses were summarized and a matrix for the core non-financial determinants was formed and inputs from all interview stages were compared.

Step 5: To identify the non-core non-financial determinants of the financial derivatives' usage within Pakistan SME businesses.

At first, the researcher reassigned all the related statements of the non-core non-financial determinants at this stage and these were stated in the copy of transcriptions. If it was necessary, the statements were verified. Next, all related statements were comprehensively summarized and a matrix for the non-core non-financial determinants was made.

Producing the report. This was the final phase, which involved final analysis and wrote-up of thematic analysis report. It told a complex story of how the data was collected in this research and analyzed and it is presented in chapter 4 of this research.

In summary, the data analysis process comprised of six phases. The first phase was familiar with the data, followed by the initial codes' generation phase. The next phase was search themes phase followed by review themes. The second last phase was included defining and naming the themes and finally, was the report generating phase. The following section then explains the ethical considerations of this research.

3.6 Ethical Considerations

The discussion on the data analysis process presented in the previous section involved six phases. In conducting this research, ethical considerations have been addressed by the researcher. Hence, this section is dedicated to explain the ethical considerations utilized in this research. All respondents were fully informed of the research process and their role within it (Patton, 1990). The respondents were assured that their privacy, anonymity, safety and comfort would be respected throughout this research process (Miles & Huberman, 1994; Mohd Harif, 2002). In addition, each respondent was required to sign a consent form from interviewee refer (appendix 5). A full disclosure about the purpose and the context of the research and copies of the interview's guide were provided to all of the respondents at the time of the interview (Patton, 1990).

As a conclusion, ethical considerations involved the activities of informing the respondents of their roles, purpose and context of the research, as well as upholding their privacy, anonymity, safety and comfort that were exercised in this research. Indeed, confidentiality of the information given by the respondents was highly maintained throughout this research process.

3.7 Summary

In summary, this chapter 3 discussed how the research was carried out in order to explore and deepened the understanding about the determinants of the usage of the financial derivatives within SME businesses in Pakistan. This chapter started with the justification of research paradigms used for this research followed by the justification of qualitative research methodology used in this research, which was then followed by the discussion of convergent interviews technique used in this research. The convergent interview process, the strengths and justifications of using convergent interviews in this research were also elaborated in this chapter. In addition, this chapter also explained and established the concepts of reliability and validity in the collection and findings of the data for this research. Data collection strategy, sampling type, sampling population, sampling size and research instrument were also discussed in this chapter as well. This was followed with the discussion of implementation of convergent interviews technique to collect data for this research. The data analysis including thematic data analysis technique was discussed followed by ethical considerations at the end of this chapter.

CHAPTER FOUR

DATA ANALYSIS

4.0 Introduction

The previous chapter 3 explained the overall methodology of this research including qualitative research approach, convergent interviews for data collection and thematic analysis technique for data analysis. This chapter is to sum up and to show the findings of the data collected by utilizing convergent interview technique in order to formulate insights on the five research issues. This chapter is divided into five sections in order to explore the research issues. The sequence of five sections is shown in figure 4.1.

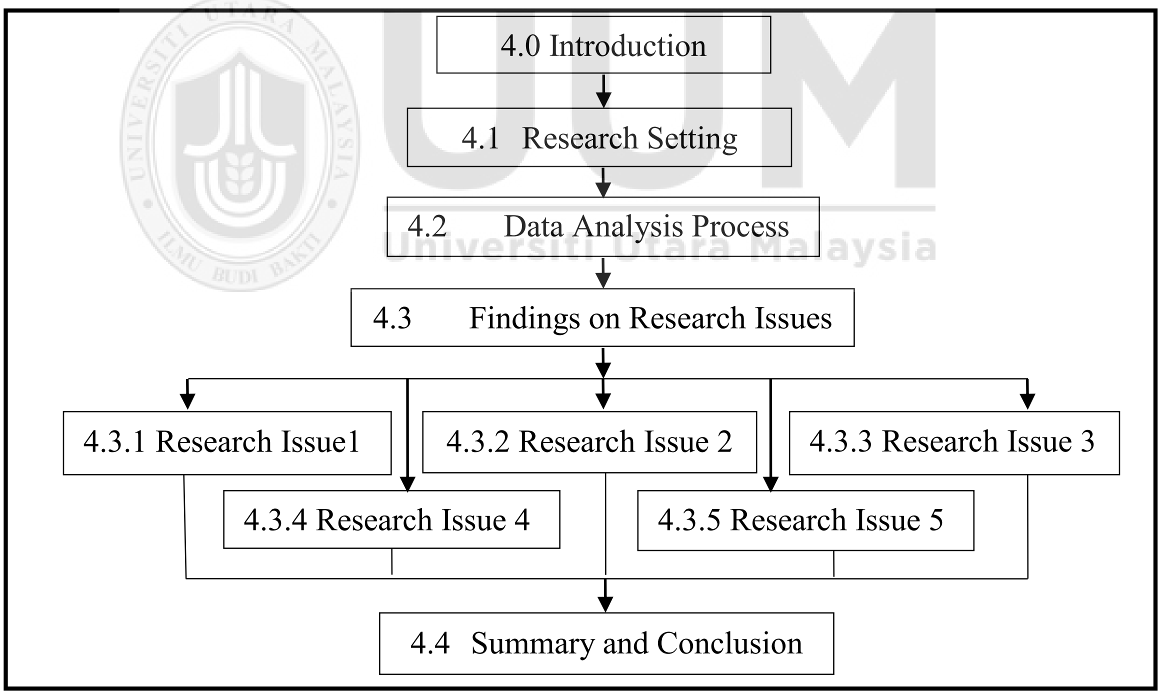


Figure 4.1
Organization of chapter 4

Source: developed for this research

There are five main sections of this chapter 4. Section 4.0 introduces this chapter. The research setting, which describes the procedure of interviews carried out and comprehensive profiling of every interviewee is provided in section 4.1. Further, data analysis process is elucidated in section 4.2. And then in section 4.3, the five research issues are explained. Consequently, this chapter is concluded with key findings for this research in section 4.4.

4.1 Research Setting

This section provides insight on the research setting. This shows the perspective that is required to understand the data provided throughout the discussion. In addition, each interviewee's profile is presented since it is necessary to provide the detail of each interviewee so as to provide background information for an in- depth data analysis.

There were three main challenges that were confronted during data collection process of this research. First, it was difficult to get acceptance and cooperation from some of the candidates referred by the prior interviewee to be interviewed. Some of them were not interested to take part in this research as an interviewee due to confidentiality issues. In addition, they declined interview invitation many times due to lack of interest. Secondly, time constraint was another challenge while scheduling interviews. Few incidents happened where interviews were rescheduled many times owing to unexpected situations. Even in few cases interviews were totally cancelled due to delay in the process of data collection. In the end, few interviewees who were referred by preceding interviewees were not suitable for the criteria set for SMEs. The profiles of interviewees is synthesised in table 4.1.

Table 4.1
The Summary of Profiles of Respondents

Respondent	Code of Respondent	Position	Size	Sector	Year of Establish	Annual Turnover PKR'mil	Number of Employees	%age of Export	Type of derivatives used
1	I01MGC01	CFO	Medium	Mfg.	1998	713	234	83%	FRA
2	I02MGC02	CFO	Medium	Mfg.	1992	761	247	91%	FRA
3	I03MGC03	CFO	Medium	Mfg.	1987	743	199	88%	Swaps
4	I04MGC04	CFO	Medium	Mfg.	1995	573	219	82%	FRA
5	I05MGC05	CFO	Medium	Mfg.	1992	651	187	85%	C. Option
6	I06MGC06	CFO	Medium	Mfg.	1999	423	200	93%	FRA
7	I07MGC07	CFO	Medium	Mfg.	1993	685	196	76%	C. Forward
8	I08MGC08	CFO	Medium	Mfg.	1993	711	224	85%	C. Swap
9	I09MGC09	CFO	Medium	Mfg.	2001	614	237	92%	C. Swap
10	I10MGC10	CFO	Medium	Mfg.	1988	779	201	82%	C. Forward
11	I11MGC11	CFO	Medium	Mfg.	1995	627	217	86%	FRA
12	I12MGC12	CFO	Medium	Mfg.	1998	537	241	68%	FRA
13	I13MGC13	CFO	Medium	Mfg.	1983	691	211	79%	C. Forward
14	I14MGC14	CFO	Medium	Mfg.	1997	744	207	73%	IR Swaps
15	I15MGC15	CFO	Medium	Mfg.	1995	781	213	85%	FRA
16	I16MGC16	CFO	Medium	Mfg.	1993	683	180	89%	C. Options
17	I17MGC17	CFO	Medium	Mfg.	1998	796	245	75%	FRA
18	I18MGC18	CFO	Medium	Mfg.	2002	588	161	90%	C. Forward
19	I19MGC19	CFO	Medium	Mfg.	2000	723	177	72%	FRA

Note: Some details are disguised for confidentiality reasons
Legend: PKR (Pakistan Rupee)
: Mfg. (Manufacturing)
: C. Forward (Currency Forwards)
: C. Swaps (Currency Swaps)
: C. Options (Currency Options)
: IR Swaps (Interest Rate Swaps)

Source: developed for this research

The interview process started according to the procedure explained in section 3.3.3 and respondents were selected based on the purposive snowballing technique as described in section 3.4. All the interviewees were selected from the population as discussed in section 3.4. The interview process ceased at the 19th interviewee based on the saturation principle discussed in section 3.4 of chapter 3.

All interviewees willingly participated and contributed in this research. These all respondents were Chief Financial Officers of SMEs. All the interviewees and their associated companies were disguised throughout this thesis to achieve anonymity. All interviewees were coded with eight alphanumerical digits as shown in table 4.1 in column 2. Along with this information, table 4.1 captured much other information such as size, sector, year of established, sales turnover, number of permanent or regular employees, percentage of export and type of financial derivatives used by SME businesses. A comprehensive preface of interviewees is explained in this research as under. Medium

In conclusion, the comprehensive profile of the interviewees who participated in this research is explained. All respondents held top position in finance and accounting departments as Chief Financial Officers in their various organizations. Every respondent was from different industry. Nineteen (19) organizations were under the categorization of medium-size firms. The number of employees in these firms ranges from hundred (100) to two hundred and fifty (250). All the firms' sales turnover is not exceeding PKR 800 million.

Total nineteen (19) interviewees from nineteen (19) organizations participated in this research, which signified that the saturation and stability was reached at this level. All those interviewees have been taken, which have fulfilled the criteria set for the definition of SMEs adopted in this research as explained in section 2.5 of chapter 2. The snowballing technique is used for all nineteen (19) interviewees as exhibited in figure 3.5, section 3.4of chapter 3. Three conditions inferred that it was valid data collection regarding this research, therefore, created a concrete foundation to continue data analysis. The subsequent section 4.2 explains data analysis process.

4.2 Data Analysis Process

In the previous section, profile of each interviewee was explained briefly. This section describes data analysis process. The data analysis process takes into account the adaptation of the thematic analysis process (Roulston, 2001; Boyatzis, 1998) as discussed in section 3.5, chapter 3. The summary of data analysis process is shown in figure 4.2. The data analysis process started after completing convergent interviews and the interview recordings were transcribed. The main version of interview protocol included general questions. Interview protocol was modified two times after different interview sessions in addition to collected responses as shown in figure 4.2. Specifically, more relevant and converged questions were incorporated in every modified interview protocol. All the questions according to every research issues, which were taken from three sets of interview protocols, summarized in table 3.8 of chapter 3.

A total of nineteen (19) interview recordings were transcribed upon the completion of convergent interview process. The data analysis process was based on interview transcriptions. These transcripts were read deep and frequently in order to become familiar with the contents of data. Initial codes of the determinants of the financial derivatives' usage were generated from interviews transcripts. Furthermore, these codes were combined with the same themes and finally, these themes were defined and named for every determinant of the financial derivatives' usage. Data was organized according to five research issues. Patterns or themes were disclosed comprehensively in form of tables and figures, which were uncovered. It is important to include tables and figures to follow the themes, which were uncovered in the transcription and to get the overall summary of findings for readers.

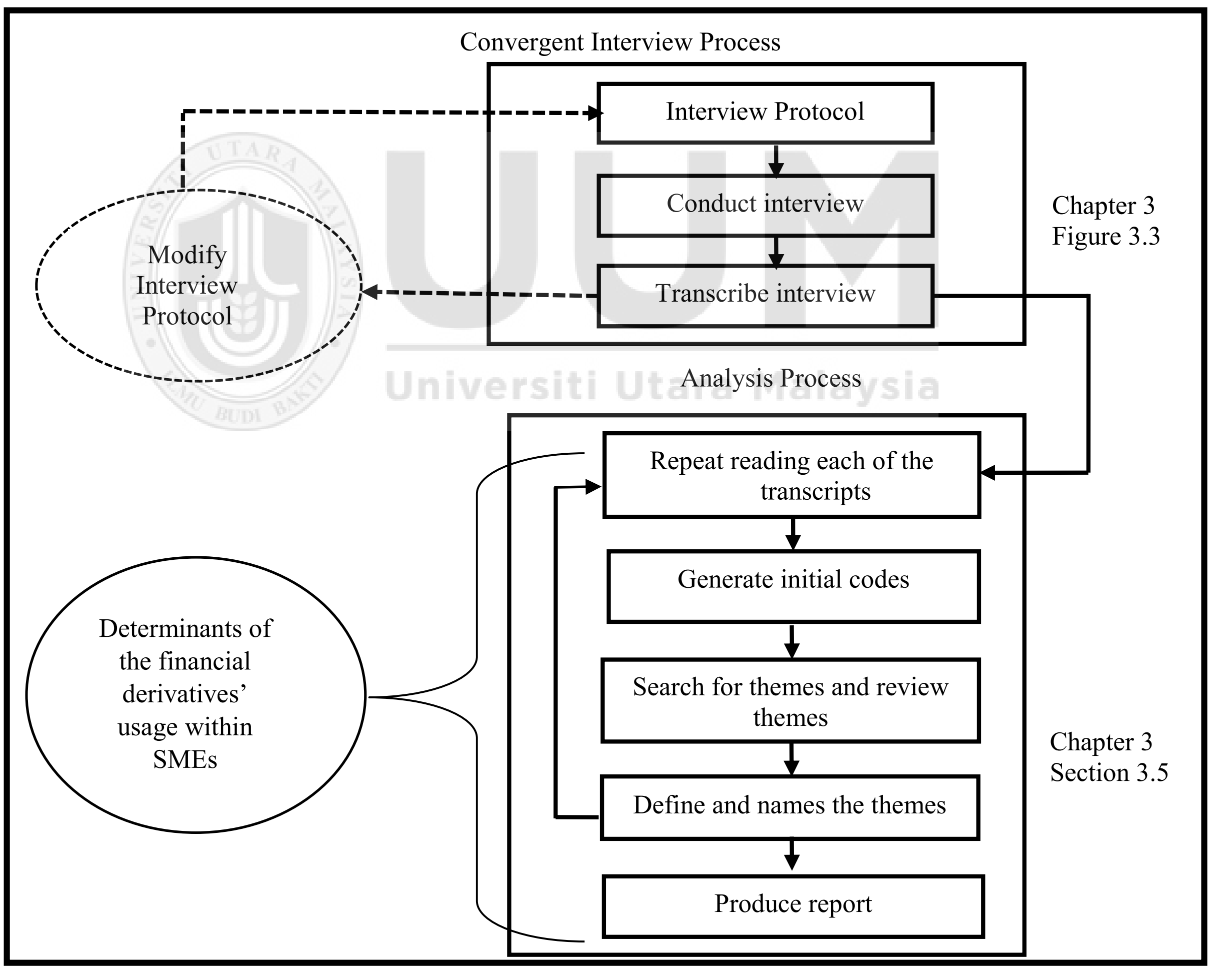


Figure 4.2
Convergent Interviewing and Data Analysis Process Utilizing Thematic Analysis Technique for Determinants of the Financial Derivatives' Usage
Source: developed for this research

4.3 Findings on Research Issues

The previous section explained the data analysis process using convergent interview technique for data collection. This section addresses the research issues stemmed from the preliminary theoretical framework, which were discussed in chapter 2, section 2.11. In addition, major themes taken from convergent interviews in findings were studied in this section. Five research issues were explored in this research. Likewise, research issue one was explained in section 4.3.1, second research issue was described in section 4.3.2, third research issue was addressed in section 4.3.3, fourth research issue was discussed in section 4.3.4 and fifth research issue was explained in section 4.3.5. Following is the thorough discussion on five research issues.

4.3.1 Analysis outcomes for research issue 1: The determinants for the SME businesses in Pakistan to use financial derivatives

This reseach issue 1 throws light on the determinants of the fianncial derivatives' usage withinSMEs in Pakistan. Reseach issue 1 has been developed and discussed in chapter 2, section 2.11.

RI1: *The determinants for the SME businesses in Pakistan to use financial derivatives*

Total 25 determinants of the financial derivatives' usage are discussed by the nineteen (19) intervieweesas shown in table 4.2. These determinants are identified after performing thematic data analysis. These determinants are pointed out by the answers from the question number 3 of interview protocol set 1 and question number 3 of interview protocol set 2 and set 3 refer (appendix 2 and appendix 3) respectively.

Table 4.2

Summary of data analysis on the determinants of the financial derivatives' usage with respect to the preliminary theoretical framework

	Determinants of Financial Derivatives' usage from Theoretical Framework (Refer to figure 2.6 of chapter 2)	Respondents from SME Businesses in Pakistan																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
		I01MGC01	I02MGC02	I03MGC03	I04MGC04	I05MGC05	I06MGC06	I07MGC07	I08MGC08	I09MGC09	I10MGC10	I11MGC11	I12MGC12	I13MGC13	I14MGC14	I15MGC15	I16MGC16	I17MGC17	I18MGC18	I19MGC19	**Frequency**
1	Firm Size	✓	✓	✓	✓	✓	✓	x	✓	x	✓	✓	✓	✓	✓	x	✓	✓	x	✓	**15**
2	Leverage	✓	✓	✓	x	x	x	x	x	x	✓	x	x	x	x	x	x	x	x	✓	**5**
3	Cash Flow Volatility	x	✓		✓	✓			✓	✓	✓	x	x	✓	x	x	x	x	✓	✓	**9**
4	Underinvestment Problem	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	**0**
5	Management Incentives	x	x	x	x	x	x	x	x	x	x	x	x	x	✓	✓	x	x	x	x	**2**
6	Growth Opportunities	x	x	x	x	x	x	x	x	x	x	✓	x	x	✓	x	x	✓	x	✓	**4**
7	Financial Distress Cost	x	x	x	x	x	x	x	✓	x	x	✓	x	x	x	x	x	x	✓	x	**3**
8	Reduction in Taxes	x	x	x	x	x	x	x	✓	✓	x	✓	x	x	x	x	x	x	x	x	**3**
9	Risk Reduction	x	x	x	x	x	x	✓	✓	✓	x	x	✓	✓	✓	✓	✓	x	✓	✓	**10**
10	Exchange Rate Risk Exposure	✓	✓	✓	✓	✓	✓	✓	x	✓	✓	✓	✓	✓	✓	✓	x	✓	✓	x	**16**
11	Firm Value	x	x	✓	✓	x	x	✓	x	x	x	✓	x	✓	x	x	x	✓	x	x	**6**
12	Interest Rate Risk Exposure	x	x	x	x	x	x	✓	✓	✓	x	x	x	x	✓	✓	✓	✓	✓	x	**8**
13	Liquidity	✓	x	✓	✓	✓	✓	x	x	✓	✓	✓	x	x	x	✓	x	✓	✓	x	**11**
14	Agency Cost	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	✓	x	x	x	**1**
15	High Corporate Governance	x	x	x	✓	✓	x	✓	x	x	x	✓	x	x	x	x	x	x	x	x	**4**
16	Risk Attitude	x	x	x	x	x	x	✓	x	x	x	✓	x	x	✓	x	✓	x	x	x	**4**
17	Risk Perception	x	x	x	x	x	x	✓	x	x	x	✓	x	✓	x	x	x	x	x	x	**3**
18	Decision Making Unit	x	x	x	x	x	x	x	✓	x	x	x	x	x	x	x	x	x	x	x	**1**
19	Lack of Awareness	x	x	x	✓	x	x	✓	x	✓	x	✓	x	x	✓	x	✓	x	x	x	**6**
20	Lack of Expertise	x	x	x	✓	x	x	✓	✓	x	✓	✓	x	x	x	✓	x	x	x	x	**6**
21	Time Horizon	✓	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	**1**
22	Un-invested cash	✓	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	**1**
23	Reduction in overall cost	x	x	x	x	x	x	x	x	x	x	x	✓	x	x	x	x	x	x	x	**1**
24	Risk Appetite	x	x	x	x	x	x	x	x	✓	x	x	x	x	x	x	x	x	x	x	**1**
25	Lack of established market	x	x	x	x	x	x	x	x	x	x	x	x	x	x	✓	x	x	x	x	**1**

Legend: ✓ Determinants confirmed by interviewees

x Determinants not confirmed by interviewees

Source: developed for this research based on results of thematic analysis in appendix 7

The first determinant that could be considered as the determinant of the financial derivatives' usage within SME businesses is *firm size*. Fifteen (15) out of nineteen (19) respondents agreed that firm size is the financial determinant of the financial derivatives' usage within SME businesses as shown in table 4.3 (row 1, frequency column).Firm size is second highly mentioned determinant because firm size is the primary reason of all businesses. Some associated quotes from the interviewees were as follows;

"…. mostly depend upon either it is small or large organizations at which scale the business is operating. If the size is large, the firm will optimize its return and hedging its risk, which arise from import and export activities." – I11MGC11

"….firm size affects the usage whenever my firm size is large its volume of transactions gets large. If I didn't hedge them the big risk exposure will flow to my company and ultimately will affect my profit." – I17MGC17

Therefore, firm size is confirmed as a financial determinant of the financial derivatives' usage within SME businesses in Pakistan.

The second determinant that could be developed into as the determinant of the financial derivatives' usage is *leverage*. Five (5) interviewees out of total nineteen (19) interviewees mentioned that leverage is the determinant of the financial derivatives' usage as shown in table 4.2 (row 2, frequency column). Some related excerpts from the interviewees were given below.

"I evaluate my leverage as well… more leveraged it would be difficult for me to get higher exposure or otherwise my firm should have extra bit of assets availability that could be used in worst case scenario." – I10MGC10

"The most important factor towards the usage of financial derivatives is leverage. If I, in a traditional way lending money that is really risky that's why I expect higher return." - I19MGC19

Consequently, in this research, leverage is confirmed as a determinant of the usage of financial derivatives within SME businesses in Pakistan.

The next determinant *cash flow volatility* could be taken into consideration as the determinant of the financial derivatives' usage. This determinant is confirmed by nine (9) interviewees out of total nineteen (19) interviewees as an important determinant of the usage of the financial derivatives as shown in table 4.2 (row 3, frequency column). It is also frequently mentioned determinant by the respondents in this research. Some helpful comments of the respondents were;

"The problem of fluctuations in my firm cash flows exists…..my firms does not has large enough cash flows due to which high risk is originates and I wants to minimize such risk…in order to minimize my risk, my hedging should be highly effective." –I05MGC05

"Yes, in medium size structures like my firm' cash flow volatility is a key factor, so I always need to give certain weight to that. And I take more initiatives based on this element mostly focusing on hedging approach." –I10MGC10.

Based on its importance, cash flow volatility is confirmed as a determinant of the usage of the financial derivatives within SMEs in Pakistan.

The fourth determinant that could be taken into consideration as a determinant of the financial derivatives' usage is *underinvestment problem*. Even a single interviewee did not consider this determinant as the determinant of the usage of the financial derivatives within SME businesses in Pakistan as shown in table 4.2 (row 4, frequency column). One of the possible justifications for the non-confirmation could be that firms do not want to indulge themselves again in high risky projects because underinvestment itself is the way firms use to keep themselves away from making investments on bondholders and debt holders' behalf. Secondly, the top management of the firm is not ready to take such big responsibility which could finish their career by making such big investment decisions for the benefit of shareholders.

Therefore, this determinant is not confirmed in this research as the determinant of the usage of the financial derivatives within SMEs in Pakistan that's why this determinant is discarded from this research.

The next determinant is *management incentives* that could be taken into consideration as the determinant of the financial derivatives' usage. This determinant is confirmed by two (2) interviewees out of total nineteen (19) interviewees as an important determinant of the usage of the financial derivatives as shown in table 4.2 (row5, frequency column). Statements of interviewees about this determinant were as follows;

"Management incentives also matter because they normally linked with the firm's decisions to use financial derivatives." – I14MGC14

"*If I look….how many incentives…I have…..in derivatives I might lose or I might gain, if I gain, I can take additional benefits by utilizing many risk management techniques*." – I15MGC15

Hence, management incentive is confirmed a valid determinant of the financial derivatives' usage within SME businesses in Pakistan.

Sixth determinant that could be taken into as a determinant of financial derivatives' usage within SME businesses is *growth opportunity*. This determinant is substantiated by four (4) interviewees out of nineteen (19) interviewees as a significant determinant of the financial derivatives as shown in table 4.2 (row 6, frequency column). Some related quotes from interviewees were as follow;

"*The growth prepositions are important….they will definitely catch the opportunity …when the firm is an opportunist, it will go for derivatives in future*." – I11MGC11

"*The potential projects are considered important in my firm during the time lag between receipts and payment, which are only possible by the usage of financial derivatives*." – I17MGC17

Therefore, growth opportunity is confirmed as a determinant of the financial derivatives' usage within SME businesses in Pakistan.

The next seventh determinant that could be considered as an important determinant of the usage of the financial derivatives within SME businesses is *financial distress cost*. This determinant is mentioned by three (3) interviewees out of nineteen (19) interviewees as shown in table 4.2 (row 7, frequency column). The statements, excerpted from the recordings of interviewees regarding financial distress cost were given below;

*"*Yes, *financial distress cost matters because when my firm doesn't have enough resources, I look towards the counterparties to help my firm by making financial contracts."* – I08MGC08

"*If the financial distress cost or cost of loss is high…it could shut down my firm business and affect it worst… then I go for derivatives. So the financial distress is very important*" –I11MGC11.

Consequently, based on the important justifications of interviewees, financial distress cost is confirmed an important determinant of the usage of the financial derivatives within SME businesses in Pakistan.

Reduction in taxes is the next determinant that could be developed into as the determinant of the financial derivatives' usage within SME businesses. This determinant is very important because it is acknowledged by three (3) interviewees out of nineteen (19) interviewees in this research as shown in table 4.2 (row 8, frequency column). The importance of this determinant can be evaluated by the comments of interviewees, which were as follow;

"Taxes volume matters a lot for my while making decision to use financial derivatives.....I account my firm unrealizable profits against currency that direct affect my firm profit and loss and other financial items."–I08MGC08

"*The usage of derivatives can reduce my level of taxes up to some extent. As I use swaps derivatives while making payments to my clients, therefore, it reduces my taxes up to certain level."*–I09MGC09

Hence, this determinant is confirmed very important determinant of the usage of the financial derivatives within Pakistan SME businesses.

The ninth determinant that could be taken into as a determinant of the financial derivatives' usage within SMEs is *Risk reduction*. This is major determinant that actually influences users to hedge by using financial derivatives. This determinant is confirmed by ten (10) interviewees out of nineteen (19) interviewees. It is fourth highly mentioned determinant by the interviewees as shown in table 4.2 (row9, column frequency).Some related quotes, which were excerpted from the interviewees' recordings were given below;

"Management wants to reduce risk by getting involved in hedging….reduce risks such as market risks and currency risks…., that' why I have to go towards financial derivatives' usage." – I07MGC07

"I takes count of risk and measure this effect so that I have to see some hedging instruments for mitigating this risk… it could minimize the risk for value by using certain hedging instruments or not." – I09MGC09

Therefore, it is confirmed a significant determinant, which SMEs within Pakistan consider before going to use financial derivatives.

The next determinant that could be developed into as a determinant of the financial derivatives' usage is *exchange rate exposure*. This determinant is mentioned by sixteen (16) interviewees out of total nineteen (19) interviewees as shown in table 2.5 (row 10, frequency column). This is the highest frequency determinant in this research because those firms, which volume of foreign exchange is high. They have the need to use financial derivatives in order to minimize their foreign exchange risk. In reaction to this determinant, following were some related quotes excerpted from interviewees;

"*For foreign exchange risk, my firm uses financial derivatives, because my firm all sales and purchases are in denomination of other than PKR.....risk of unknown currency fluctuations in our balance sheet, profit and loss account."* – I04MGC04

"My Firm would definitely go for hedging in order to minimize its foreign exchange risk exposure generated from currency fluctuations....unfortunately due to unstable currency or foreign exchange in Pakistan."– I11MGC11

Thus, exchange rate risk exposure is confirmed the main determinant of the usage of the financial derivatives within SMEs in Pakistan.

Firm value is the eleventh determinant that could be taken into as a determinant of financial derivatives within SME businesses in Pakistan. Out of total nineteen (19) interviewees, six (6) interviewees confirmed the significance of firm value as shown in table 4.2 (row 11, frequency column). It is deemed key determinant because if firm value increases then its capacity to take risks and absorb them also increases if loss occurs and the firms move towards the usage of financial derivatives. Following are some statements of interviewees taken from their interviews' recording;

“*If my firm value is increasing it is getting important toward financial derivatives usage…and if I see financial derivatives are affordable and manageable then ok, otherwise my firm may not go for derivatives. This is the main reason.”* – I13MGC13

“The most important thing is the capacity of the firm. If my firm has the capacity to go about the financial derivatives, then I ask its management to go ahead for financial derivatives.” – I03MGC03

Thus, firm value is confirmed the main determinant of the usage of the financial derivatives within SME businesses in Pakistan.

The twelfth determinant that could be considered as a determinant of the financial derivatives’ usage within SME businesses is *interest rate exposure*. Eight (8) interviewees out of nineteen (19) interviewees acknowledged the importance of interest rate exposure as shown in table 4.2 (row 12, frequency column). It is considered an important determinant because if there is a high fluctuation in the interest rate in the country then firms lock their interest rate risk by using swaps option with their counter parties. Some related quotes from the interviewees were as follow;

“When my firm has to get facility from local and international banks it will go for hedging especially interest rate hedging, forward booking, interest forward booking, to save itself from interest rate fluctuations.” –I08MGC08

"Risk of interest rate fluctuations as it happens in our country matters very much for all the firms which have foreign transactions. If I don't hedge or lock my interest rate these fluctuations can become the reason of big loss for my company." – I17MGC17

Hence, it is confirmed that interest rate exposure is an important determinant of the financial derivatives' usage within SMEs in Pakistan.

Liquidity is the thirteenth determinant that could be developed as the determinant of the financial derivatives' usage within SME businesses in Pakistan. This determinant is confirmed by eleven (11) interviewees out of nineteen (19) interviewees as shown in table 4.2 (row 13, frequency column). It is third major determinant that has high frequency in this research. Some excerpts from interviews' recording were as follow;

"Why liquidity is important ….my firm is exposed to set maturity gaps that I have to bear in my working capital… At the scale we are operating, financial derivatives are important for us." – I04MGC04

"The liquidity preposition is very vital…. In our country, there are junks of realizable factors….manufacturing firm, need to maintain liquidity at certain level down the line, that's why my firm maintains its liquidity by using financial derivatives." – I10MGC10

Therefore, it is confirmed that this determinant is an important factor, which SME businesses within Pakistan consider before going to use financial derivatives.

The fourteenth financial determinant that could be considered as the determinant of the financial derivatives' usage is *agency cost*. Only one interviewee out of nineteen (19) interviewees substantiated the importance of agency cost in the usage of financial derivatives in SME businesses as shown in table 4.2(row14, frequency column). This determinant was clearly mentioned by the interviewee in his comment, which was as follow:

"This is a bit complex procedure to operate in derivatives but the other things make feel the financial derivatives usage, we need to analyze cost and benefit analysis, I go to such contracts and I have some agency cost to bear." – I16MGC16

Therefore, agency cost matters for SMEs in Pakistan to affect their decision to use financial derivatives due to which it is confirmed to include in this research.

The next determinant that could be look over as a determinant of the financial derivatives' usage is *corporate governance*. This determinant is confirmed by four (4) interviewees from the total nineteen (19) interviewees as a determinant of the usage of the financial derivatives as shown in table 4.2 (row 15, frequency column). Some related comments about this determinant were as follow;

"State regulators affect the firm decision making…In case of Pakistan SBP imposes some regulations for foreign currency loans and foreign currencies. Management has to take decision particularly about swaps and other interest rate instruments." – I07MGC07

"In addition corporate governance matters a lot.....if my firm operates in a highly risk environment. It means corporate culture prevails in such types of organizations then it would be convenient for the organization to go for financial instruments." – I11MGC11

Thus, it is confirmed that corporate governance affects the firm's decision to use financial derivatives within Pakistan SME businesses.

Risk attitude is another determinant that could be look into as the determinant of the financial derivatives within SMEs. This determinant is confirmed by four (4) interviewees from the nineteen (19) interviewees as shown in table 4.2 (row 16, frequency column). Some statements excerpted from the interviews recordings were as follow;

"If management of my firm is not risk evaluator means it is not concerned with fair value hedges and currency fluctuations. If it is not going for foreign currency loans therefore, top management attitude towards the usage of financial derivatives matters." – I07MGC07

"The second factor is risk attitude, because if my organization is risk averse, it would definitely go for hedging....If it has some foreign funding then it will go for swaps and if management is not risk averse then management does not bother anything around it." – I11MGC11

Based on important justifications given by an interviewee, this determinant is confirmed as a determinant of the financial derivatives' usage within SMEs in Pakistan.

Seventeenth determinant that could be considered as the determinant of the financial derivatives' usage within SME businesses is *risk perception*. This determinant has been confirmed by three (3) interviewees out of nineteen (19) interviewees as shown in table 4.2 (row 17, frequency column). Few related statements of interviewees that were excerpted from interview's recordings were as follow;

"The perception of risk by top management of my firm is considered very much important in our investment decisions especially the usage of financial instruments." – I11MGC11

"My firm cannot expect to bear any fluctuations and this is the main reason, because we are facing such fluctuations that's why, my firm goes for the financial derivatives." – I13MGC13

Hence, it is confirmed that risk perception of management and owners can influence the firm to use financial derivatives within SME businesses in Pakistan.

Next determinant of the financial derivatives' usage within SME businesses is *decision making unit*. This determinant was considered by one of the nineteen (19) interviewees in this research as shown in table 4.2 (row 18, frequency column). The important justification provided by the interviewee during interview session was as follow:

"If internally, I will not have any body to deal in derivatives, so I will go for third parties services, life pass, non-financial services, who directly give us services about forward booking and agency." – I08MGC08

It is confirmed from the above authentic justifications that decision making unit is a determinant of the financial derivatives' usage within SME businesses for this research.

Lack of awareness is the next determinant that could be taken into as a determinant of the financial derivatives' usage within SME businesses. This determinant has been confirmed by six (6) interviewees out of nineteen (19) interviews conducted in this research as shown in table 4.2 (row19, frequency column). Following were some related quotes taken from the interviewees recordings;

"If you are not aware about the risk and its mitigation strategies you cannot hedge. Awareness matters because two persons define risk differently." – I04MGC04

"If management of my firm is well aware of using hedges and swaps, it will definitely start using those instruments just to make the firm stronger." – I07MGC07

Therefore, based on interviewees' important comments, it is confirmed that lack of awareness matters a lot for the usage of financial derivatives within SME businesses in Pakistan.

The twentieth determinant that could be considered as the determinant of the financial derivatives' usage within SME businesses is *lack of expertise.* This determinant was confirmed by six (6) interviewees out of total twenty (20) interviewees as shown in table 4.2 (row 20, frequency column). Few related statements excerpted from the interviews recording were as follow;

"Along with other factors…lack of expertise cannot be ignored. This deficiency can be covered….through consultancy or advisory like hedge funds." – I04MGC04

"Firm's capacity to deal with financial derivatives is not an easy task. It needs expertise, money, deliberation and market full information regarding financial derivatives. It needs to know the risk." – I11MGC11

Thus, it is confirmed by the interviewees that lack of expertise affects the firm's decision to use financial derivatives within Pakistan SME businesses

The twenty first determinant of the financial derivatives' usage within SME businesses in Pakistan is *time horizon*. This determinant refers to the short term and long term improvements against the losses a firm face. No doubt, it is beneficial for short term but for long run it brings improvements for firms to indulge it in these contracts to minimize their risk losses. This determinant is confirmed as determinant of the financial derivatives' usage by one of the interviewees as shown in table 4.2 (row 21, frequency column). The statement of particular interviewee that was excerpted from the recording was as follow:

"Time horizon is a factor, which can influence my decision to use financial derivatives, here time horizon means, short terms and long term improvements against the losses a firm face. No doubt, it is beneficial for short time, but for long run….brings improvements ….. to indulge it in these contracts to minimize risk losses." –I01MGC01

Thus, time horizon is confirmed as a valid determinant of the financial derivatives' usage within SME businesses in Pakistan.

The twenty second determinant of the financial derivatives' usage is *un-invested cash*, within Pakistan SME businesses. Only one interviewee out of nineteen (19) interviewees added that un-invested cash is an important financial determinant of the financial derivatives' usage as shown in table 4.2 (row 22, frequency column). Un-invested cash refers to the cash, which is not being used by the firm and it is held by the firm as reserves. Interviewee explicitly stated this determinant as follow:

"*It is important to mention here that the extra cash I mean the un-invested cash can be used for the financial derivatives contracts to take the benefit of currency risk and other related risk factors, which firms think important*" – I01MGC01.

Based on its important justification given by interviewee, this determinant is confirmed as a determinant of the financial derivatives' usage within SME businesses in Pakistan.

Next following determinant of the usage of the financial derivatives within SME businesses in Pakistan is *reduction in cost*. This determinant is added by one of the interviewees out of nineteen (19) as shown in table 4.2 (row 22, frequency column). The comment of interviewee about this determinant was as follow:

"I mean the overall reduction in total cost should be considered….concerns and decisions are based on reducing the cost and reducing the risk….indulging myself in financial contracts to minimize my cost."–I12MGC12

There is no denying fact that major purpose of reducing risk is to reduce the cost. This is why manufacturing firms do cost and benefit analysis before going to make any financial decision. Therefore, based on interviewee's important comment, this determinant is confirmed an important determinant of the usage of the financial derivatives within SME businesses in Pakistan.

Risk Appetite is twenty fourth determinant of the finanical derivatives' usage within SME businesses in Pakistan. This determinant refers to the desire of risk absorption by the firm top management, which depends upon their specific behaviors. This determinant is confirmd by one of the nineteeen (19) interviewees conducted in this reseach. This determinant is shown in table 4.2 (row 24, frequency column). The quotation regarding this determinant taken from the excerption of interview's recording is as follow:

"Appetite of getting risk in order obtaining high rewards, so, this could be one of the factors, if my firm has high risk appetite it could hedge its risks in different perspectives. So… more risk appetite ….inclined to stay stable….know how about derivatives." – I09MGC09

Therefore, risk appetite is confirmed as a determinant of the financial derivatives' usage within SME businesses in Pakistan.

The last determinant of the financial derivatives' usage within SME businesses in Pakistan is *lack of established markets*. In this context, lack of established markets refers to the capital markets, which do not provide platform to the small and medium size firms. One interviewee out of nineteen (19) interviewees pointed out this determinant as shown in table 4.2 (row 25, column frequency). Following is the statement of an interviewee who confirmed this new determinant;

"It is necessary to mention here the concern of lack of established markets. When I make decision regarding the usage of financial derivatives….either my markets support me or not. SECP has been working on it. I think SECP is very progressive …but still much more needs to be done." – I15MGC15

Thus, lack of established market is confirmed a valid determinant of the financial derivatives' usage within SME businesses in Pakistan.

Summary of Research Issue 1: In summary, total twenty-four (24) determinants of the financial derivatives' usage within SME businesses in Pakistan are confirmed in this research. Thus, the findings have answered the research issue 1 of this research.

4.3.2 Analysis outcomes for research issue 2: Core financial determinants for the SME businesses in Pakistan to use financial derivatives

Research issue 1has been discussed in previous section 4.3.1. This section in turn, explains the research issue 2 of this research, which was developed and discussed in, section 2.11 of chapter 2. The research issue 2 is as follow:

RI2: *The core financial determinants for the SME businesses in Pakistan to use financial derivatives*

Seven (7) core financial determinants of the usage of the financial derivatives within SME businesses in Pakistan are discussed after completing thematic data analysis. Table 4.3 summarized every core financial determinant of the financial derivatives' usage with respect to preliminary theoretical framework of this research. The determinants are pointed out by the answers from the question number 4 of interview protocol set 1, question number 5 and question number 6 from interveiw protocol set 2 and set 3 respectively refer (appendices 2 and 3).

In this research, the first determinant that could be considered as a core financial determinant of the financial derivatives' usage within SME businesses is *firm size*. Seven (7) out of nineteen (19) interviewees agreed that firm size is the core financial determinant of the financial derivatives' usage within SME businesses as shown in table 4.3(row 1, frequency column).

Table 4.3
Summary of data analysis of the core financial determinants of the financial derivatives' usage with respect to the preliminary theoretical framework

	Core Financial Determinants of Financial Derivatives' usage from Theoretical Framework (Refer to figure 2.7 of chapter 2)	**Respondents from SME Businesses in Pakistan**																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
		I01MGC01	I02MGC02	I03MGC03	I04MGC04	I05MGC05	I06MGC06	I07MGC07	I08MGC08	I09MGC09	I10MGC10	I11MGC11	I12MGC12	I13MGC13	I14MGC14	I15MGC15	I16MGC16	I17MGC17	I18MGC18	I19MGC19	**Frequency**
1	Firm Size	✓	x	x	✓	x	✓	✓	x	x	x	✓	x	x	x	x	✓	x	✓	x	**7**
2	Leverage	✓	✓	✓	✓	✓	x	✓	✓	x	x	✓	x	x	x	x	✓	x	x	x	**9**
3	Underinvestment Problem	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	**0**
4	Exchange Rate Exposure	✓	✓	✓	✓	✓	✓	✓	✓	✓	x	✓	✓	✓	✓	✓	✓	✓	✓	x	**17**
5	Interest Rate Exposure	x	x	x	x	✓	x	✓	✓	✓	x	✓	x	✓	x	x	x	✓	x	x	**7**
6	Liquidity	✓	✓	✓	✓	x	✓	x	✓	✓	✓	✓	✓	x	x	✓	✓	✓	✓	✓	**15**
7	Un-invested cash	✓	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	**1**

Legend: ✓ Determinants confirmed by interviewees

X Determinants not confirmed by interviewees

Source: developed for this research based on results of thematic analysis in appendix 8

Firm size is the primary reason of all businesses, as confirmed by interviewees. Some associated quotes from the interviewees were as follow;

"In my opinion, firm size just like large and medium firms can take better management; these can tackle issues related to financial derivatives." –I07MGC07

"So in Pakistan scenario, hedging is very good technique…ultimately firm size matters because we are small and medium size entities and we….have not sufficient funds that we can cope with sudden obligations." – I18MGC18

Therefore, firm size is confirmed as a core financial determinant that could be considered as the determinant of the financial derivatives' usage within SME businesses in Pakistan.

The second determinant that could be categorized as a core financial determinant of the financial derivatives' usage is *leverage*. Nine interviewees (9) out of total nineteen (19) interviewees mentioned that leverage is a financial determinant of the financial derivatives' usage as shown in table 4.3 (row 2, frequency column). Following were the few statements excerpted from the recording of interviews;

"I think from leverage……When deciding at the situation…going for foreign currency loans. For my fir, I go for foreign banks and foreign financial instruments….using interest rate swaps, interest rate futures and other derivative instruments." – I07MGC

"Leverage in the sense…when I want to hedge my risk. If my leverage…..not support so I would not try to take other risks without hedging my import and exports. If my capital structure is very well…I might take risk and save money." – I11MGC11

Consequently, leverage is confirmed as the core financial determinant of the usage of financial derivatives within SME businesses in Pakistan.

The third determinant that could be taken into consideration as a core financial determinant of the financial derivatives' usage is *underinvestment problem*. Even a single interviewee did not consider this factor as the determinant of the usage of the financial derivatives within SME businesses in Pakistan as shown in table 4.3 (row 3, frequency column).

Therefore, this determinant is not confirmed as the core financial determinant of the usage of the financial derivatives within SME businesses in Pakistan and it is discarded from this research.

The next determinant that could be developed into as the core financial determinant of the financial derivatives' usage is *exchange rate exposure*. This determinant mentioned by seventeen (17) interviewees out of nineteen (19) interviewees as shown in table 4.3 (row 4, frequency column). This is high frequency determinant in this research because those firms, which volume of foreign exchange is high they have the need to use financial derivatives in order to minimize their foreign exchange risk. In reaction to this determinant, few quotes of interviewees taken from interviews' transcription were as follow;

"Foreign exchange risk is the major determinants for my firm because all sales and purchases are in denomination of other than PKR.....scale we are operating we cannot take risk of unknown currency fluctuations...due to....using financial instruments." – I04MGC04

"The risk to be mitigated for FX risk, if I make payment in a currency different from my own country then I should be in an opposite position, receipt or payment position in that currency, that's why I will hedge my risk." – I12MGC12

Thus, foreign exchange exposure is confirmed the main determinant of the usage of the financial derivatives within SME businesses in Pakistan.

The fifth determinant that could be considered as the core financial determinant of the financial derivatives' usage within SME businesses is *interest rate exposure*. Seven (7) interviewees out of nineteen (19) interviewees acknowledged the importance of interest rate exposure as shown in table 4.3 (row 5, frequency column). It is considered important determinant because if there are high fluctuations in the interest rate in the country, then firms lock their interest rate risk by using swaps option with their counter parties. Some related quotes from the interviewees were as follow:

"Interest rate set by the state bank is also another factor....I have transactions with other stakeholders outside the business that's why sometimes my firm faces risk and such risks affect our decision to use financial derivatives." – I05MGC05

"To get facility from local and international banks… my firm goes for hedging especially interest rate hedging forward booking interest forward booking….against interest rate fluctuation."–I08MGC08

Hence, it is confirmed that interest rate exposure is an important core financial determinant of the financial derivatives' usage within SME businesses in Pakistan.

The sixth and second last determinant that could be considered as the core financial determinant of the financial derivatives' usage is *liquidity*. This determinant is confirmed by fifteen (15) interviewees out of nineteen (19) interviewees as shown in table 4.3 (row 6, frequency column). It is the second major determinant that has high frequency in this research. Following were some explicit statements of interviewees:

"From the importer perspective like us if liquidity position is tight, it means importer is not able to pay their LCs in time in future and I will make contracts with my counter parties to mature my LCs in time." – I02MGC02

"*My firm carries liquidity prepositions ….. my firm faces liquidity crunch but it is very much important to understand…how firm can take exposure…. On taking financial exposure on certain firms with the liquidity crunch prevail*." –I10MGC10

Therefore, it is confirmed that this determinant is an important core financial determinant which SME businesses within Pakistan consider before going to use financial derivatives.

The seventh core financial determinant of the financial derivatives' usage is *un-invested cash*, within Pakistan SME businesses. Only one interviewee out of nineteen (19) interviewees added that un-invested cash is an important financial determinant of the financial derivatives' usage as shown in table 4.3 (row 7, frequency column). Un-invested cash refers to the cash, which is not being used by the firm and it is held by the firm as reserves. Interviewee explicitly stated this determinant as follow:

"*It is important to mention here that the extra cash I mean the un-invested cash can be used for the financial derivatives' contracts to take the benefit of currency risk and other related risk factors, which I think important*" – I01MGC01.

Based on its important justification given by interviewee, this determinant is confirmed as core financial determinant of the financial derivatives' usage within SME businesses in Pakistan.

Summary of Research Issue 2. In summary, six (6) core financial determinants of the financial derivatives' usage within SME businesses in Pakistan were confirmed in this research. One of the core financial determinants that is underinvestment problem is not confirmed by even one of the interviewees. Therefore, the underinvestment problem is discarded from this research. Thus, the findings have answered the research issue 2 of this research.

4.3.3 Analysis outcomes for research issue 3: Non-core financialdeterminants for the SME businesses in Pakistan to use financial derivatives

The previous section comprehensively discussed the findings of research issue 2. Current section throws light on reseach issue 3 of this research. As recalling in mind, this research issues 3 was developed and discussed in section 2.11 of chapter 2. Following was the second research issue of this research;

RI3: *The non-core financial determinants for the SME businesses in Pakistan to use financial derivatives*

Total six (6) non-core financial determinants of the financial derivatives' usage arediscussed by the nineteen (19) interviewees after performing thematic data analysis.These determinansts are shown in table 4.4.

The determinants are ponted out by the answers from the question number 5 of interview protocol set 1, question number 7 and question number 8 of interview protocol set 2 and question number 8 and question number 9 of interveiw protocol set 3 refer (appendices 2, 3 and 4).

Table 4.4
Summary of data analysis on the non-core financial determinants of the financial derivatives' usage with respect to the preliminary theoretical framework

	Respondents from SME Businesses in Pakistan																			
Non-Core Financial Determinants of Financial Derivatives' usage from Preliminary Theoretical Framework (Refer to figure 2.8 of chapter 2)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
	I01MGC01	I02MGC02	I03MGC03	I04MGC04	I05MGC05	I06MGC06	I07MGC07	I08MGC08	I09MGC09	I10MGC10	I11MGC11	I12MGC12	I13MGC13	I14MGC14	I15MGC15	I16MGC16	I17MGC17	I18MGC18	I19MGC19	**Frequency**
1 Cash Flow Volatility	x	✓	✓	✓	x	✓	✓	✓	✓	✓	✓	x	✓	✓	x	x	✓	✓	✓	**14**
2 Financial Distress Cost	x	x	x	x	x	x	x	x	x	x	x	x	x	✓	x	x	x	x	x	**1**
3 Reduction in Taxes	✓	x	✓	x	✓	x	x	✓	✓	✓	✓	✓	x	x	✓	x	x	✓	x	**10**
4 Firm Value	x	x	✓	x	x	x	✓	✓	x	x	✓	x	✓	x	x	x	✓	x	x	**6**
5 Agency Cost	✓	x	x	✓	✓	✓	x	✓	x	x	✓	x	✓	x	x	✓	✓	✓	✓	**11**
6 Reduction in overall cost	x	x	x	x	x	x	x	x	x	x	x	✓	x	x	x	x	x	x	x	**1**

Legend: ✓ Determinants confirmed by interviewees
X Determinants not confirmed by interviewees

Source: developed for this research based on results of thematic analysis in appendix 9

The first determinant, *cash flow volatility* could be taken into consideration as the non-core financial determinant of the financial derivatives' usage within SME businesses. This determinant is confirmed by fourteen (14) interviewees out of nineteen (19) interviewees as an important non-core financial determinant of the usage of the financial derivatives as shown in table 4.4 (row 1, frequency column). Cash flow volatility is the third highly mentioned determinant by the respondents in this research. Some helpful comments of the interviewees were as follow:

“The problem of fluctuations in cash flows means there are not have a large enough cash flows... my firm will not be interested in using high risk procedure…. minimize risk, my hedging…..highly effective.” –I06MGC06

“The volatility of cash flows is the main cause to use financial derivatives. My firm has to maintain its cash to feed that type of cost, which happens due to cash flow volatility.” – I13MGC13

Based on its importance, cash flow volatility is confirmed an important financial determinant of the usage of the financial derivatives within SME businesses in Pakistan. The second determinant that could be considered as an important non-core financial determinant of the usage of the financial derivatives in SME businesses is *financial distress cost*. This determinant is mentioned by only one interviewee out of nineteen (19) interviewees as shown in table 4.4 (row 2, frequency column). This determinant confirmation frequency is very low. The interviewee explained this determinant as follow;

“*If the financial distress or cost of loss is such high that could shut down my business and affect worst my business and I must go for derivatives. But if the cost has the minimal effect on foreign exchange then firm will not falling in all complexities. So the financial distress is very important*.” –I11MGC11.

Consequently, based on the important justification of interviewee financial distress cost is confirmed an important non-core financial determinant of the usage of the financial derivatives within SME businesses in Pakistan.

Reduction in taxes is the next determinant that could be developed into as the non-core financialdeterminant of the financial derivatives' usage. This determinant is also very important because it is acknowledged by ten (10) interviewees out of nineteen (19) interviewees in this research as shown in table 4.4 (row 3, frequency column). The importance of this determinant can be evaluated by the comments of interviewees, which were as follow;

"*Taxes volume matters very much for my firm while making decision to use financial derivatives….forward booking against imports definitely…protect same money against risk ….that direct affect my firm profit and loss and my financial items."*–I08MGC08

"The usage of derivatives can reduce my firm level of taxes and my firm uses swaps derivatives to make payments which ultimately reduced our taxes by using hedging instruments by proper accounting treatments." –I09MGC09

Hence, this determinant is confirmed very important non-core financial determinant of the usage of the financial derivatives within Pakistan SME businesses.

The fourth determinant that could be look over as the non-core financial determinant of the financial derivatives' usage is *firm value*. This determinant is confirmed by five (5) interviewees from the nineteen (19) interviewees as non-core financial determinants of the usage of the financial derivatives as shown in table 4.4 (row 4, frequency column). Some related comments about this determinant were as follow;

"The most important thing is the capacity of the firm. If my firm has the capacity to go about the financial derivatives, then it asks its management to go ahead for financial derivatives." – I03MGC03

"If my firm value is increasing then my firm risk absorbing capacity is also increasing and it makes easy for the firm to take risky actions because you know derivatives usage itself is a risk activity." – I17MGC17

Thus, it is confirmed that firm value affects the firm's decision to use financial derivatives within Pakistan SME businesses.

The next fifth determinant that could be considered as thenon-core financial determinant of the financial derivatives' usage is *agency cost*. Eleven (11) interviewees out of nineteen (19) interviewees substantiated the importance of agency cost in the usage of financial derivatives in SME businesses as shown in table 4.4 (row 5, frequency column). This determinant was clearly mentioned by the interviewees in their comments as follow;

"*The medium size firms like us has to see our cost involved in using financial derivatives for hedging. If my hedging is not effective, I will be making losses, however in order to minimize my risk, my hedging should be highly effective*." –I06MGC06

"Yes, as I have already discussed agency costs….in the other scenario agency cost. I make analysis of agency cost then I take move for financial derivatives as well."– I08MGC08

Therefore, it is confirmed that agency cost matters a lot for SME businesses in Pakistan to affect their decision to use financial derivatives.

The last sixth non-core financial determinant of the financial derivatives' usage within SME businesses in Pakistan is *reduction in cost*. This determinant is added by one of the interviewees out of nineteen (19) intervieweesas shown in table 4.3 (row 6, frequency column). The comment of interviewee about this determinant was as follow;

"The overall reduction in cost should be considered, if I tell you about my own firm, all my concerns and decisions are based on reducing the cost and reducing the risk. If I say financial impacts…If the usage of financial derivatives can decrease my overall cost, I will definitely move towards their usage otherwise not."– I12MGC12

Therefore, based on interviewee important comment, this non-core financial determinant is confirmed vital for the usage of the financial derivatives within SME businesses in Pakistan.

Summary of Research Issue 3: In summary, total six (6) non-core financial determinants of the financial derivatives' usage within SME businesses in Pakistan are confirmed in this research. Therefore, the findings from interviews have answered research issue 3 of this research.

4.3.4 Analysis outcomes for research issue 4: Core non-financial determinants for the SME businesses in Pakistan to use financial derivatives

The previous section discussed the third research issue of this research. Current section focuses on the fourth research issue of this research, which was developed and discussed in section 2.11 of chapter 2.

RI4: *The core non-financial determinants for the SME businesses in Pakistan to use financial derivatives*

Outcomes of the convergent interviews acknowledged that core non-financial determinants affect the SME businesses decisions to use financial derivatives. Furthermore, thematic data analysis approach exposed two (2) core non-financial determinants with respect to preliminary theoretical framework of this research as summarized in table 4.5. These determinants are pointed out by the answers from the question number 6 of interview protocol set 1 and question number 9 and question number 10 of interview protocol set 2 and set 3 respectively refer (appendices 2, 3 and 4).

Table 4.5
Summary of data analysis on the core non-financial determinants with respect to the preliminary theoretical framework

		Respondents from SME Businesses in Pakistan																			
	Core Non-Financial Determinants of Financial Derivatives' usage from Theoretical Framework (Refer to figure 2.9 of chapter 2)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
		I01MGC01	I02MGC02	I03MGC03	I04MGC04	I05MGC05	I06MGC06	I07MGC07	I08MGC08	I09MGC09	I10MGC10	I11MGC11	I12MGC12	I13MGC13	I14MGC14	I15MGC15	I16MGC16	I17MGC17	I18MGC18	I19MGC19	**Frequency**
1	Growth Opportunities	x	✓	✓	✓	✓	✓	x	x	✓	✓	✓	x	✓	✓	x	x	✓	✓	✓	**13**
2	Risk Reduction	✓	x	✓	✓	x	✓	✓	x	✓	✓	✓	✓	✓	x	✓	x	✓	x	x	**12**

Legend: ✓ Determinants confirmed by interviewees
X Determinants not confirmed by interviewees

Source: developed for this research based on results of thematic analysis in appendix 10

The first determinant that could be considered as the core non-financial determinant of the financial derivatives' usage within SME businesses is *growth opportunities*. Thirteen(13) out of nineteen (19) interviewees agreed that growth opportunities is the core non-financial determinant of the financial derivatives' usage within SME businesses as shown in table 4.5 (row 1, frequency column).Growth opportunities are the primary reason of all businesses, as confirmed by interviewees. Some associated quotes from the interviewees were as follow;

"Emerging projects in Pakistan like CPEC, are coming in the country that would increase the usage of the financial derivatives. Joint ventures and foreign investors' involvement is making a ground to increase the usage of financial derivatives in Pakistan."- I05MGC05

"Different firms have different growth opportunities to avail such types of contracts…For my firm, to secure its growth opportunities I might go for financial derivatives which are not disturbed due to such market changes." – I13MGC13

Therefore, growth opportunities is confirmed as a core non-financial determinant of the financial derivatives' usage within SME businesses in Pakistan.

The second determinant that could be considered as a core non-financial determinant of the financial derivatives' usage is *risk reduction*. Twelve (12) interviewees out of total nineteen (19) interviewees mentioned that risk reduction is the core non-financial determinant of the financial derivatives' usage as shown in table 4.5 (row 2, frequency column). Some related excerpts from the interviewees were given below;

"Commonly and the basic reason of my firm is to use financial derivatives to reduce risks because the volatility of the foreign currency….which is most likely be mitigated by using financial derivative instruments."– I03MGC03

"The actual thing is risk for which I hedge for my firm. Anybody, who opt for derivatives, definitely looking risk mitigation for their inventory and monetary items." – I09MGC09

Consequently, in this research, risk reduction is confirmed as a core non-financial determinant of the usage of financial derivatives within SME businesses in Pakistan.

Summary of Research Issue 4. In summary, two (2) core non-financial determinants of the financial derivatives' usage within SME businesses in Pakistan are confirmed by the interviewees. Thus, the findings have answered the research issue 4 of this research.

4.3.5 Analysis outcomes for research issue 5: Non-core, non-financial determinants for the SME businesses in Pakistan to use financial derivatives

The previous section discussed the fourth research issue of this research. Current section explains the fifth (5) research issue of this research, which was developed and discussed in section 2.11 of chapter 2. Following was the research issue 5;

RI5: *The non-core, non-financial determinants for the SME businesses in Pakistan to use financial derivatives*

Thematic data analysis approach exposed non-core, non-financial determinants with respect to preliminary theoretical framework of this research as summarized in table 4.6.

Table 4.6

Summary of data analysis on the non-core, non-financial determinants of the financial derivatives' usage with respect to the preliminary theoretical framework

		Respondents from SME Businesses in Pakistan																			
Non-Core Non- Financial Determinants of Financial Derivatives' usage from Theoretical Framework (Refer to figure 2.10 of chapter 2)		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
		I01MGC01	I02MGC02	I03MGC03	I04MGC04	I05MGC05	I06MGC06	I07MGC07	I08MGC08	I09MGC09	I10MGC10	I11MGC11	I12MGC12	I13MGC13	I14MGC14	I15MGC15	I16MGC16	I17MGC17	I18MGC18	I19MGC19	**Frequency**
1	Management Incentives	x	x	x	x	x	x	x	✓	x	x	✓	x	x	x	x	x	x	x	x	**2**
2	High Corporate Governance	✓	x	✓	✓	x	✓	x	x	x	✓	✓	✓	✓	x	x	x	✓	✓	x	**10**
3	Risk Attitude	✓	x	x	✓	x	✓	✓	✓	x	✓	✓	✓	✓	✓	x	✓	x	x	x	**11**
4	Risk Perception	x	✓	x	x	✓	x	✓	x	x	✓	x	x	✓	✓	x	x	x	x	✓	**7**
5	Decision Making Unit	x	x	x	✓	x	x	x	x	x	x	✓	x	x	x	x	x	x	x	x	**2**
6	Lack of Awareness	x	✓	x	✓	✓	✓	✓	✓	✓	✓	x	x	✓	✓	✓	✓	✓	✓	x	**14**
7	Lack of Expertise	✓	x	✓	✓	✓	✓	✓	✓	x	✓	✓	x	x	✓	✓	✓	✓	✓	x	**14**
8	Risk Appetite	x	x	x	x	x	x	x	x	✓	x	x	x	x	x	x	x	x	x	x	**1**
9	Lack of Established market	x	x	x	x	x	x	x	x	x	x	x	x	x	x	✓	x	x	x	x	**1**
10	Time Horizon	x	x	x	x	x	x	x	x	x	x	✓	x	x	x	x	x	x	x	x	**1**

Legend: ✓ Determinants confirmed by interviewees
X Determinants not confirmed by interviewees

Source: developed for this research based on results of thematic analysis in appendix 11

These determinants are pointed out by the answers from the question number 7 of interview protocol set 1, question number 10 of interview protocol set 2 and question number 11 of interview protocol set 3 refer (appendices 2, 3 and 4).

The first determinant that could be developed into as the non-core, non-financial determinant of the financial derivatives' usage is *management incentives*. This determinant is mentioned by two (2) interviewees out of nineteen (19) interviewees as shown in table 4.6 (row 1, frequency column). In reaction to this determinant, few quotes of interviewees taken from interviews' transcription were as follow;

"Yes, some firms prefer to be responsive and others not responsive toward risk management…own benefits more than the firm benefits… if I see any benefit in the usage of financial derivatives I prefer to consider it." – I08MGC08

"It varies firm to firm…common factor is management incentives. Financial incentives…influence the top managers to move towards the usage of financial derivatives." – I11MGC11

Thus, management incentive is confirmed by interviewees as the non-core, non-financial determinant of the usage of the financial derivatives within SME businesses in Pakistan.

The second determinant that could be taken into as a non-core, non-financial determinant of financial derivatives' usage within SME businesses is *high corporate governance*. This determinant is substantiated by ten (10) interviewees out of nineteen (19) interviewees as a significant non-core, non-financial determinant of the financial derivatives as shown in table 4.6 (row 2, frequency column). Some related quotes from interviewees were as follow;

"Corporate governance is very important factor...my firm's core governance policies are important before taking decision to go towards the usage of financial derivatives." – I03MGC03

"Yes, corporate governance is the main factor…hedging requires a lot of approvals from the management, quick decision making at the right time at the right situation." – I12MGC12

Therefore, high corporate governance is confirmed as a non-core, non-financial determinant of the financial derivatives' usage within SME businesses in Pakistan.

The next following determinant that could be considered as a non-core, non-financial determinant of the financial derivatives' usage within SME businesses is *risk attitude*. Eleven (11) interviewees out of nineteen (19) interviewees acknowledged the importance of risk attitude as shown in table 4.6 (row 3, frequency column). Some related quotes from the interviewees were;

"Attitude of those charge with governance are the BODs. My attitude toward risk is very important in the usage of the FDs, someone to work based on some hatches and hunches…would never use FDs." – I04MGC04

"Mainly, management attitude toward acceptance of risk is significant…if management is agreed to accept this risk, my firm may not go for such FDs." – I13MGC

Hence, it is confirmed that risk attitude is an important non-core, non-financial determinant of the financial derivatives' usage within SME businesses in Pakistan.

The fourth determinant that could be developed as a non-core, non-financial determinant of the financial derivatives' usage is *risk perception*. This determinant is confirmed by seven (7) interviewees out of nineteen (19) interviewees as shown in table 4.6 (row 4, frequency column). Following were some explicit statements of interviewees;

"Top management's will and perception in my firm influences the firm to use financial derivatives. I cannot step forward because CFO has to comply with the top management decision and their policies." – I05MGC05

"The perception about the risk matters a lot….if I perceive something to happen in future, it depends upon my perception how I perceive risk, and how I can mitigate it." – I19MGC19

Therefore, it confirmed this determinant is an important non-core, non-financial determinant, which SME businesses within Pakistan consider before going to use financial derivatives.

The next fifth determinant, *decision making unit* could be taken into consideration as the non-core, non-financial determinant of the financial derivatives' usage within SME businesses. This determinant is confirmed by two (2) interviewees out of nineteen (19) interviewees as an important non-core, non-financial determinant of the usage of the financial derivatives as shown in table 4.6 (row 5, frequency column). Some helpful comments of the interviewees were as follow;

"Availability of the intermediary that are there to help hedge only particular kind of risks…we consider before using financial derivative instruments." – I04MGC04

"The most common factor includes decisions making units. These units are very effective because….they give opportunity to the medium size firms like us… providing services…make booking arrangements for firms like us to help us in financial instruments usage." – I11MGC11

Based on its importance, decision making unit is confirmed an important non-core, non-financial determinant of the usage of the financial derivatives within Pakistan SME businesses.

The next determinant that could be considered as a non-core, non-financial determinant of the usage of the financial derivatives in SME businesses is *lack of awareness*. This determinant is mentioned by fourteen (14) interviewees out of nineteen (19) interviewees as shown in table 4.6 (row 6, frequency column). This determinant confirmation frequency is very high. The interviewees explained this determinant as follow;

"Awareness about the usage of FDs is very big issue for medium size firms like us…suppose if I do not know when to take risk…..not aware about financial markets and my own country issues then I will not put steps forward to use FDs." – I02MGC02

" The users who are bearing very much cost due to unawareness by using sophisticated channels, which charge them high cost….decision making of the firm also influences the firm to use FDs." – I05MGC05

Consequently, based on the important justifications of interviewees, lack of awareness is confirmed an important non-core, non-financial determinant of the usage of the financial derivatives within SME businesses in Pakistan.

Lack of expertise is the next determinant that could be developed into as anon-core, non-financial determinant of the financial derivatives' usage within SME businesses. This determinant is very important because it is acknowledged by fourteen (14) interviewees out of nineteen (19) interviewees in this research as shown in table 4.6 (row 7, frequency column). The importance of this non-financial determinant can be evaluated by the comments of interviewees, which are as follow;

"Experts have the eye on the current financial position of the country like economic indicators, foreign indicators, different trade agreements…should I look on before taking the call." – I03MGC03

"Again, the expertise of the management like me in my firm determines and hedges my firm risk, so that the cost and benefit of this arrangement match each other……" - I04MGC04

Hence, this determinant is confirmed very important non-core, non-financial determinant of the usage of the financial derivatives within Pakistan SME businesses.

Next following eighth determinant of the usage of the financial derivatives within SMEs in Pakistan is *risk appetite*. This determinant is added by only one interviewee out of nineteen (19) intervieweesas shown in table 4.6 (row 8, frequency column). The comment of interviewee about this determinant was as follow;

"I will start using financial derivatives when I would have the capacity to absorb the risk, suppose if my firm is not big one or not enough it is difficult for it to use derivatives therefore, firm risk appetite matters." – I09MGC09

Therefore, based on interviewee important comment, this determinant is confirmed significant non-core, non-financial determinant of the usage of the financial derivatives within SME businesses in Pakistan.

Lack of established market is the second last non-core, non-financial determinant of the financial derivatives' usage within Pakistan SME businesses. Only one interviewee out of nineteen (19) interviewees added that lack of established market is an important non-financial determinant of the financial derivatives' usage as shown in table 4.6 (row 9, frequency column). He explicitly explained this determinant as follow;

"Today lack of established market is the main issue.....Securities and Exchange Commission of Pakistan (SECP) has been working on it. When we make decision regarding the usage of financial derivatives….we see either it is possible for us to do that, either our market supports us or not….I think SECP is very progressive to corporate compliances….they have certain regulations regarding this activity but still much more needs to be done." – I15MGC15

Based on its important justification given by interviewee, this determinant is confirmed as a non-core non-financial determinant of the financial derivatives' usage within SME businesses in Pakistan.

The last tenth determinant that could be the determinant of the financial derivatives' usage within SME businesses in Pakistan is *time horizon*. This determinant refers to the short and long term improvements against the losses a firm face. No doubt, it is beneficial for short but for long run it brings improvements for firms to indulge it in these contracts to minimize their risk losses. This determinant is confirmed as determinant of the financial derivatives' usage by one of the interviewees as shown in table 4.6 (row 11, frequency column). The statement of particular interviewee that is excerpted from the interviewee's recording was as follow;

"I think time horizon is a factor, which can influence my decision to use financial derivatives, here time horizon means, short and long term improvements against the losses a firm face.....no doubt, it is beneficial for short time....but for long run it also brings improvements for firms to indulge.... in these contracts to minimize the risk losses." –I01MGC01

Thus, time horizon is confirmed as a valid determinant of the financial derivatives' usage within SME businesses in Pakistan.

Summary of Research Issue 5: In summary, ten (10) non-core, non-financial determinants of the financial derivatives' usage within SME businesses in Pakistan are confirmed in this research. Thus, the findings have answered the research issue 5 of this research.

4.4 Summary

This chapter analyzed the data collected by using convergent interviews and reported the findings of determinants of financial derivatives' usage within SME businesses in Pakistan. The findings of these five research issues are summarized collectively in table 4.7.The collected data was analyzed by utilizing thematic analysis technique. The data analysis was conducted by looking at the five (5) research issues of this research in relation to determinants of the financial derivatives' usage within SME businesses in Pakistan.

Table 4.7
Summary of Answers to the Research Issues of this Research

	Research Issues		**Determinants of financial derivatives' usage within SME businesses in Pakistan**	
1	What are the determinants of financial derivatives' usage within SME businesses in Pakistan	24	DFD1 : Firm Size DFD2 : Leverage DFD3 : Cash Flow Volatility ~~DFD4 : Underinvestment Problem~~ DFD5 : Management Incentives DFD6 : Growth Opportunities DFD7 : Financial Distress Cost DFD8 : Reduction in Taxes DFD9 : Risk Reduction DFD10: Exchange Rate Exposure DFD11: Firm Value DFD12: Interest Rate exposure DFD13: Liquidity	DFD14: Agency Cost DFD15: High Corporate Governance DFD16: Risk Attitude DFD17: Risk Perception DFD18: Decision Making Unit DFD19: Lack of Expertise DFD20: Lack of Awareness DFD21: Time Horizon * DFD22: Un-invested Cash * DFD23: Reduction in overall Cost * DFD24: Risk Appetite * DFD25: Lack of Established Market*
2	What are the core financial determinants of financial derivatives' usage within SME businesses in Pakistan	6	CFD1 : Firm Size CFD2 : Leverage ~~CFD3 : Underinvestment Problem~~ CFD4 : Exchange Rate Exposure CFD5 : Interest Rate Exposure CFD6 : Liquidity CFD7 : Un-invested Cash *	
3	What are the non-core financial determinants of financial derivatives' usage within SME businesses in Pakistan	6	NCFD1: Cash Flow Volatility NCFD2: Financial Distress Cost NCFD3: Reduction in Taxes NCFD4: Firm Value NCFD5: Agency Cost NCFD6: Reduction in Cost *	
4	What are the core non-financial determinants of financial derivatives within SME businesses in Pakistan	2	CNFD1: Growth Opportunities CNFD2: Risk Reduction	
5	What are the non-core, non-financial determinants of financial derivatives' usage within SME businesses in Pakistan	10	NCNFD1 : Management Incentives NCNFD2 : High Corporate Governance NCNFD3 : Risk Attitude NCNFD4 : Risk Perception NCNFD5 : Decision Making Unit NCNFD6 : Lack of Awareness NCNFD7 : Lack of Expertise NCNFD8 : Risk Appetite * NCNFD9 : Lack of Established Market * NCNFD10: Time Horizon *	

Legend: * *new discovered determinant*

Source: developed for this research

The findings of these five (5) research issues namely; overall determinants, core financial determinants, non-core financial determinants, core non-financial determinants and non-core non-financial determinants are summarized individually in table 4.2, 4.3, 4.4, 4.5, and 4.6. All the determinants of financial derivatives' usage within SME businesses in Pakistan included in the preliminary theoretical framework (figure 2.10 in chapter 2) have been confirmed from the results of analysis, apart from underinvestment problem.

The underinvestment problem was neither identified nor acknowledged by all the nineteen (19) interviewees. The findings of this research about underinvestment problem are in line with the findings of Praveen and Jijo (2017) which implies that underinvestment problem is not a determining factor for firms' derivatives usage. In addition, one of the possible justifications for the non-confirmation could be that firms do not want to indulge themselves again in high risky projects because underinvestment itself is the way firms use to keep themselves away from making investments on bondholders and debt holders' behalf. Secondly, the top management of the firm is not ready to take such big responsibility which could finish their career by making such big investment decisions for the benefit of shareholders. In this chapter, answers of all five research issues of this research are presented.

CHAPTER FIVE

CONCLUSIONS AND IMPLICATIONS

5.0 Introduction

This is the research issue formulated to represent the research problem: *How and why the determinants of the financial derivatives' usage could be established within SME businesses in Pakistan?* This research problem has been explained in section 1.2 of chapter 1. Current chapter 5 discusses the findings of this research in reaction to this research problem. This dissertation is segregated into five chapters in order to explore this research problem.

Overview of whole dissertation is provided in chapter 1. Section 1.1 discussed the background of this research. Research problem is explained in section 1.2 followed by section 1.3 which presented the justifications of the research. A glimpse of research issues was taken in section 1.4. After that, research objectives were explained in section 1.5. Subsequently, scope of this research was presented in section 1.6 followed by section 1.7 which discussed operational definitions of this research. Section 1.8 explained the organization of whole dissertation and the whole chapter was summarized in section 1.9.

Subsequently, literature review relevant to the research problem was reviewed and the research gaps were identified from the literature in chapter 2. Section 2.1 of chapter 2 shed light on the overview and importance of the financial derivatives, which was followed by definitions of financial derivatives in section 2.2. Next, section 2.3

comprehensively explained the different types of financial derivatives and non-Pakistan literature on the determinants of the usage of the financial derivatives in general businesses in section 2.4. Section 2.5 provided definitions of small and medium size firms which was followed by non-Pakistan literature on the determinants of the usage of the financial derivatives in SME businesses in section 2.6.

Furthermore, Pakistan literature on the determinants of the usage of the financial derivatives in SME businesses was explained in section 2.7. Subsequently, section 2.8 formulated preliminary theoretical framework for this research followed by research issues of this research in section 2.9 and the whole chapter 2 was summarized in last section 2.10.

Chapter 3 explained the overall research methodology of this research in order to attain objectives of this research. Section 3.1 of chapter 3 started with the justification of research paradigms used for this research. Then, justifications of qualitative research used for this research was discussed in section 3.2 followed by convergent interview technique presented in section 3.3. Subsections 3.3.1, 3.3.2, and 3.3.3 described nature of convergent interviews, strengths and justifications of using convergent interviews and reliability and validity of this research finding respectively. In section 3.4, the explanation of data collection of this research was given. Subsequently, data analysis technique was explained in section 3.5 and in section 3.6, ethical considerations were described. The whole chapter was summarized in section 3.7.

Meanwhile, the analysis and findings of data collected by utilizing convergent interview technique reported in chapter 4 to answer the five research issues of this research. The research setting was provided in section 4.1, which described the snowballing of interviewees and comprehensive profiling of every interviewee. Further, data analysis process was elucidated in section 4.2. And then, findings of five research issues were explained in section 4.3. Consequently, this chapter was concluded with key outcomes for this research in section 4.4.

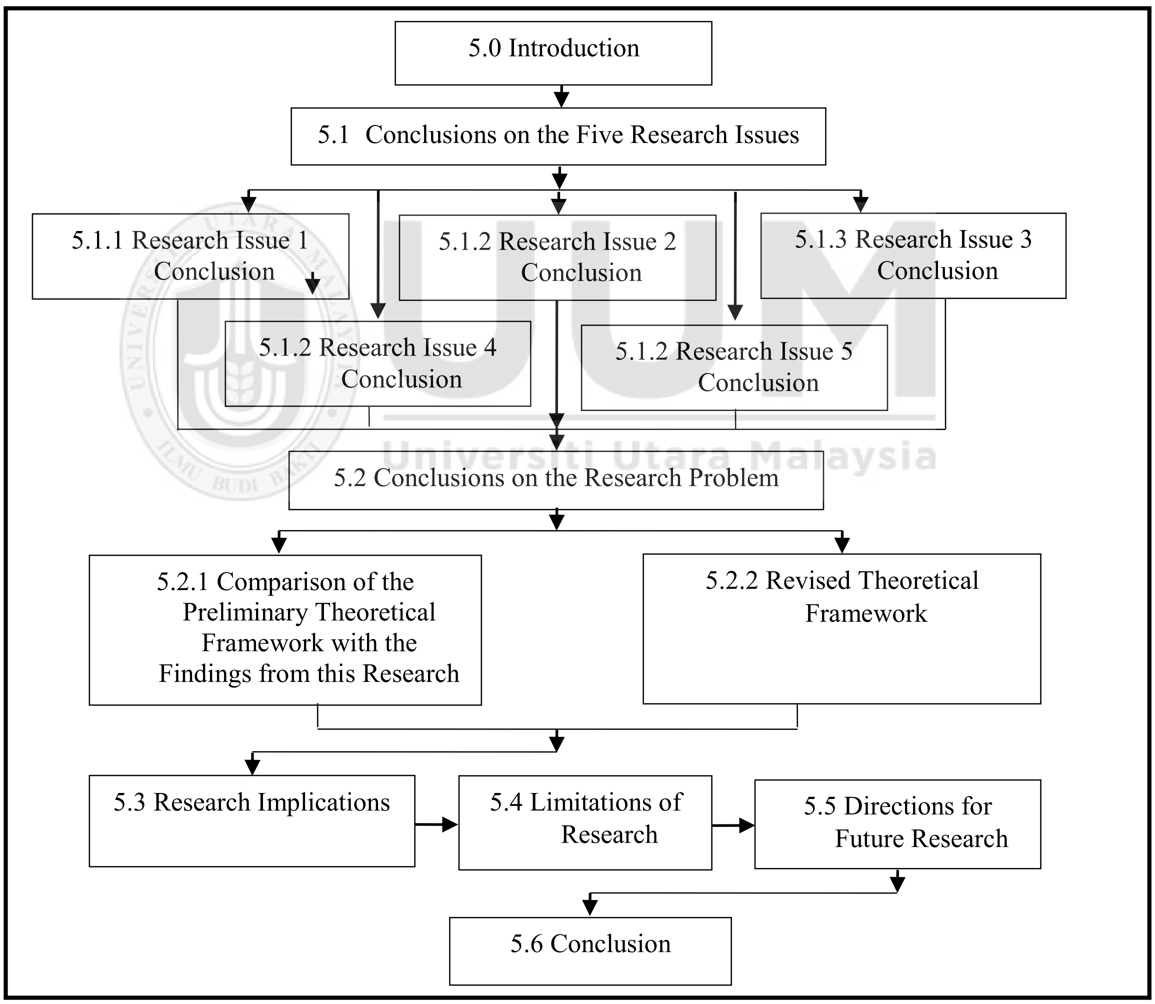


Figure 5.1
Flow of chapter 5

Source: developed for this research

The concluding chapter of this dissertation is chapter 5. This chapter 5 comprises of six sections along with five subsections as shown in figure 5.1. It starts with section 5.0, which outlines this chapter. Section 5.1 concludes the five research issues of this research comprising of five subsections (5.1.1, 5.1.2, 5.1.3, 5.1.4, 5.1.5) on the five research issues (1, 2, 3, 4 and 5) respectively. The research problem of this research is revealed in section 5.2 and this is followed by section 5.3 which explains the research implications. Research limitations are discussed in section 5.4. Subsequently, section 5.5 provides directions for future research and finally the research conclusion is stated in section 5.6.

5.1 Conclusions on the Five Research Issues

This section discusses the main determinants enumerated in the literature review as discussed in chapter 2 for each of the five research issues and makes comparison of these determinants to this research finding. This section also contrasts and compares this research finding with the literature so that the contribution of this research could be identified as related to the determinants of the financial derivatives' usage within Pakistan SME businesses. A comprehensive summary of the synthesisation of the literature and the conclusions for each research issue for this research is presented in the following table 5.1.

Table 5.1
Summary of synthesisation of literature and conclusions for each of the five research issues for this research

Research Issues	Findings and Conclusions about the research issues	Occurrence in the literature chapter 2 (no. of articles)
1	**1.1 Nineteen (19) determinants of financial derivatives' usage within SME businesses in Pakistan from preliminary theoretical framework.**	
	1 : Firm Size	9
	2 : Leverage	7
	3 : Cash Flow Volatility	4
	4 : Management Incentives	2
	5 : Growth Opportunities	5
	6 : Financial Distress Cost	4
	7 : Reduction in Taxes	3
	8 : Risk Reduction	6
	9 : Exchange Rate Exposure	5
	10: Firm Value	2
	11: Interest Rate exposure	3
	12: Liquidity	5
	13: Agency Cost	2
	14: High Corporate Governance	2
	15: Risk Attitude	1
	16: Risk Perception	1
	17: Decision Making Unit	1
	18: Lack of Expertise	1
	19: Lack of Awareness	1
	1.2 Five (5) *new* determinants of financial derivatives' usage within SME businesses in Pakistan.	
	1: Time Horizon	none
	2: Un-invested Cash	none
	3: Reduction in overall Cost	none
	4: Risk Appetite	none
	5: Lack of Established Market	none

2	**2.1 Five (5) core financial determinants of the financial derivatives' usage within SME businesses from the preliminary theoretical framework**	
	1 : Firm Size	9
	2 : Leverage	7
	3 : Exchange Rate Exposure	5
	4 : Interest Rate Exposure	3
	5 : Liquidity	5
	2.2 One *new* core financial determinant of the financial derivatives' usage within SME businesses from the preliminary theoretical framework	
	1 : Un-invested Cash	none
3	**3.1 Five (5) non-core financial determinants of the financial derivatives' usage within SME businesses from the preliminary theoretical framework**	
	1 : Cash Flow Volatility	4
	2 : Financial Distress Cost	4
	3 : Reduction in Taxes	3
	4 : Firm Value	2
	5 : Agency Cost	2
	3.2 One *new* non-core financial determinant of the financial derivatives' usage within SME businesses from the preliminary theoretical framework	
	1: Reduction in overall Cost	none
4	**4.1 Two (2) core non-financial determinants of the financial derivatives' usage within SME businesses from the preliminary theoretical framework**	
	2 : Growth Opportunities	5
	3 : Risk Reduction	6

5	**5.1 Seven (7) non-core, non-financial determinants of the financial derivatives' usage within SME businesses from the preliminary theoretical framework**	
	1: Management Incentives	2
	2 : High Corporate Governance	2
	3 : Risk Attitude	1
	4 : Risk Perception	1
	5 : Decision Making Unit	1
	6 : Lack of Awareness	1
	7 : Lack of Expertise	1
	5.2 Three (3) *new* non-core, non-financial determinants of the financial derivatives' usage within SME businesses from the preliminary theoretical framework	
	1 : Risk Appetite	none
	2 : Lack of Established Markets	none
	3 : Time Horizon	none

Source: developed for this research

5.1.1 Conclusion about research issue 1: What are the determinants for the SME businesses in Pakistan to use financial derivatives?

Research issue 1 delves into what constitutes the determinants of the financial derivatives' usage within SME businesses in Pakistan. Two major results can be depicted from the findings of this research issue 1 as shown in table 5.1 above (conclusion 1.1 and 1.2). The details are presented in conclusions 1.1 and 1.2.

Conclusion 1.1 (1): *Firm size* being a determinant of the financial derivatives' usage within SME businesses in Pakistan. The first conclusion is about *firm size* which could be the determinant of the financial derivatives' usage within Pakistan SME businesses. From the general businesses literature (non-Pakistan literature), firm size is discussed the prominent determinant with regards to the usage of the financial derivatives within SME businesses (Nguyen & Faff, 2002; Heaney & Winata, 2005; Mallin et al., 2001; Rossi, 2013; Berkman et al., 2002; Khumawala et al., 2016 and Alnassar & Chin, 2015) as shown in table 2.3, section 2.4 of chapter 2. Moreover, the same result on this determinant was also found in the non-Pakistan SME businesses literature (Pennings & Garcia, 2004; Fantini, 2014) as shown in table 2.9, section 2.6 of chapter 2.

Similarly, based on the discussion in chapter 4 section 4.3.1, firm size has been verified by fifteen (15) interviewees from SME businesses in Pakistan as a determinant of the financial derivatives' usage. The findings of this research are very consistent to the literature of this research. Moreover, firm size matters a lot because as the size of the firms gets higher, their values of sales, number of transactions increases due to which their risk exposure also increases and then these firms need to move towards the usage of the financial derivatives to mitigate their risk exposure. Therefore, firm size as a determinant of the financial derivatives' usage within SME businesses in Pakistan is confirmed to be included in the theoretical framework of this research.

Conclusion 1.1 (2): *Leverage* as a determinant of the financial derivatives' usage within SME businesses in Pakistan. The second conclusion is related to *leverage* which could be the determinant of the financial derivatives' usage within Pakistan SME businesses. This determinant was broadly mentioned in the non-Pakistan general businesses literature on financial derivatives' usage (Nguyen & Faff, 2002; Berkman et al., 2002; Heaney & Winata, 2005; Khumawala et al., 2016 and Bartram et al., 2009) as shown in table 2.3, section 2.4 of chapter 2. In addition, the same phenomenon on this determinant was also found in non-Pakistan literature on SME businesses (Pennings & Garcia, 2004; Fantini, 2014) as shown in table 2.9, section 2.6 of chapter 2.

As explained in the findings of this research issue 1 in chapter 4 section 4.3.1, this determinant is verified by five (5) interviewees. Therefore, leverage as a determinant of the financial derivatives' usage within SME businesses in Pakistan is confirmed to be included in the theoretical framework of this research because respondents explained that leverage influences the usage of financial derivatives when firms have no more option to borrow more debts and firms debt borrowing limit is finished then these firms move towards the usage of financial derivatives to meet their debt requirements.

Conclusion 1.1 (3): ***Cash flow volatility*** **as a determinant of the financial derivatives' usage within SME businesses in Pakistan.** The third conclusion is related to *cash flow volatility* which could be the determinant of the financial derivatives' usage within Pakistan SME businesses. Leverage had been recognized in a non-Pakistan general businesses literature on the financial derivatives' usage (Benson & Oliver, 2004; Mallin et al., 2010; Khumawala et al., 2016 and Aretz et al., 2007) as shown in table 2.3 , section 2.4 of chapter 2 but this determinant was not found in non-Pakistan SME businesses literature.

The findings of this research as described in research issue 1, section 4.3.1 of chapter 4, and show that nine (9) interviewees verified cash flow volatility as a determinant of the financial derivatives' usage. These findings are in accordance with the literature.

Therefore, cash flow volatility is confirmed to be included in the theoretical framework of this research as a determinant of the financial derivatives' usage within Pakistan SME businesses because when firms cash flow volatility increases it makes reluctant to the management to arrange funds to meet its current obligations. When firms' cash flows are volatility then firms make financial agreements with their counter parties to arrange funds for near future obligations.

Conclusion 1.1 (4): *Management Incentives* as a determinant of the financial derivatives' usage within SME businesses in Pakistan. Next, the fourth conclusion is about *management incentives* which could be the determinant of the financial derivatives' usage within SME businesses in Pakistan. Numerous management incentives were discussed as a determinant of the financial derivatives in non-Pakistan literature on general businesses (Bartram et al., 2009; Aretz et al., 2007) as shown in table 2.3, section 2.4 of chapter 2. Conversely, no prior research discussed management incentives as the determinant of the financial derivatives' usage within non-Pakistan literature on SME businesses.

In this research finding two (2) Chief Financial Officers verified management incentives as the determinant of the financial derivatives in the SME businesses in Pakistan in research issue 1, section 4.3.1 of chapter 4, which is similar with the past literature on the financial derivatives' usage. Thus, management incentive as a determinant of the financial derivatives' usage within SME businesses in Pakistanis confirmed to be included in the theoretical framework of this research because when firms attach incentives for more risky projects then managers take more risk for higher returns of their firms and their own incentives. As financial derivatives itself are risky products therefore, managers take risks while engaging themselves with the usage of financial derivatives to seek more management incentives.

Conclusion 1.1 (5): *Growth opportunities* as a determinant of the financial derivatives' usage within SME businesses in Pakistan. The fifth conclusion is related to *growth opportunities* which could be the determinant of the financial derivatives' usage within Pakistan SME businesses. The existing non-Pakistan literature in general businesses on the determinants of the financial derivatives' usage discussed growth opportunities as the determinant of the financial derivatives' usage (Nguyen & Faff, 2002; Heaney & Winata, 2005; Rossi, 2013; Sprcic & Sevic, 2012) as shown in table 2.3, section 2.4 of chapter 2. On the other hand, this determinant had also mentioned in non-Pakistan SME businesses literature as the determinant of the financial derivatives' usage (Fantini, 2014) as shown in table 2.9, section 2.6 of chapter 2.

Thus, in this research finding as explained in research issue 1, section 4.3.1 of chapter 4, four (4) interviewees verified growth opportunities as the determinant of the financial derivatives' usage. This finding is similar with the past literature. Hence, growth opportunities as a determinant of the financial derivatives' usage within Pakistan SME businesses are confirmed to be included in the theoretical framework of this research because when firms look some potential projects which are viable for the firms then these firms engage themselves in financial derivatives while making long term contracts with their counterparties to catch those potential projects.

Conclusion 1.1 (6): *Financial distress cost* as a determinant of the financial derivatives' usage within SME businesses in Pakistan. The sixth conclusion is related to the *financial distress cost* which could be the determinant of the financial derivatives' usage within Pakistan SME businesses. The non-Pakistan literature in general businesses discussed financial distress cost as a determinant of the financial derivatives' usage (Bartram et al., 2009; Nguyen & Faff, 2002; Berkman et al., 2002 and Alnassar & Chin, 2015) as shown in the table 2.3, section 2.4 of chapter 2. On the other hand, this determinant was not discussed in the non-Pakistan SME businesses literature as a determinant of the financial derivatives' usage.

The findings of this research, in reference to research issue 1, section 4.3.1 of chapter 4, indicated that three (3) interviewees verified financial distress cost as a determinant of the financial derivatives' usage. This research finding is consistent with the existing literature. Therefore, financial distress cost as a determinant of the financial derivatives' usage within Pakistan SME businesses is confirmed to be included in the theoretical framework of this research because when firms predict that their credit rating is decreasing and there is no opportunity available to obtain more debts; this situation is called financial distress cost and firms save themselves from financial distress cost by making financial contracts with their counter parties to fulfil their financial requirement and make themselves financially stable.

Conclusion 1.1 (7): *Reduction in Taxes* as a determinant of the financial derivatives' usage within SME businesses in Pakistan. The seventh conclusion is about *reduction in taxes,* which could be the determinant of the usage of the financial derivatives within Pakistan SME businesses. From the non-Pakistan literature on general businesses, reduction in taxes was discussed as a determinant of the usage of the financial derivatives (Sprcic & Sevic, 2012; Aretz et al., 2007 and Heaney & Winata, 2005) as shown in table 2.3, section 2.4 of chapter 2. On the contrary, no prior research had discussed reduction in taxes as a determinant of financial derivatives' usage within non-Pakistan literature on SME businesses.

Reduction in taxes has been verified by three (3) interviewees from SME businesses in Pakistan in this research as a determinant of the financial derivatives' usage. The finding of this research is very consistent with the literature of this research. Therefore, reduction in taxes as a determinant of the financial derivatives' usage in Pakistan SME businesses is confirmed to be included in the theoretical framework of this research because when firms makes financial contracts with their counterparties they use their contracts certificates for taking more loans and to increase their debt level. As their level of debt increases they have the option of taking benefit of interest expense due to which firm's taxable income decreases and their tax amount also reduces when tax function is convex.

Conclusion 1.1 (8): *Risk Reduction as a* determinant of the financial derivatives' usage within SME businesses in Pakistan. The eighth conclusion is related to *risk reduction* which could be the determinant of the financial derivatives' usage within

Pakistan SME businesses. This determinant was discussed in the non-Pakistan general businesses literature on financial derivatives' usage (Benson & Oliver, 2004; Bartram et al., 2011; Mallin et al., 2010; Alnassar & Chin, 2015 and Hentschel & Kothari, 2001) as shown in table 2.3, section 2.4 of chapter 2. In addition, the same phenomenon on this determinant was also found in non-Pakistan literature on SME businesses (Pennings & Garcia, 2004) as shown in table 2.9, section 2.6 of chapter 2.

As explained in the finding of this research issue 1 in section 4.3.1 of chapter 4, this determinant is verified by ten (10) interviewees. Therefore, risk reduction as a determinant of the financial derivatives' usage in Pakistan SME businesses is confirmed to be included in the theoretical framework of this research because due to multi-lateral and bilateral agreements among countries which at one side provide the opportunity to increase trade but on other side many types of risks occur that's why this is the common determinant and every firm has the main issue to reduce its risk which can be easily mitigated by using financial derivatives.

Conclusion 1.1 (9): *Exchange rate exposure* as a determinant of the financial derivatives' usage within SME businesses in Pakistan. The ninth conclusion is related to *exchange rate exposure* which could be the determinant of the financial derivatives' usage within Pakistan SME businesses. The existing non-Pakistan literature on general businesses on the determinants of the financial derivatives' usage discussed exchange rate exposure as the determinant of the financial derivatives' usage (Hentschel & Kothari, 2001; Zhang, 2009 and Nguyen & Faff, 2003) as shown in table 2.3, section 2.4 of chapter

2. On the other hand, this determinant had also been mentioned in non-Pakistan SME businesses literature (Hrubosova & Kamenikova, 2007; Fantini, 2014) as shown in table 2.7, section 2.6 of chapter 2.

Thus, in this research finding as explained in research issue 1, section 4.3.1 of chapter 4, sixteen (16) interviewees verified exchange rate exposure as a determinant of the financial derivatives' usage. This finding is in line with past literature. Hence, exchange rate exposure as a determinant of the financial derivatives' usage within Pakistan SME businesses is confirmed to be included in the theoretical framework of this research because in Pakistan since one decade there are currency fluctuations and firms facing foreign exchange risk that's why they use financial derivatives to eliminate such type of risk by making currency swaps and other related contracts with their counterparties.

Conclusion 1.1 (10): ***Firm value*** **as a determinant of the financial derivatives' usage within SME businesses in Pakistan.** Next, the tenth conclusion is about *firm value* which could be the determinant of the financial derivatives' usage within SME businesses in Pakistan. Firm value was discussed as a determinant of the financial derivatives' usage in non-Pakistan literature on general businesses (Nguyen & Faff, 2010; Bartram et al., 2011) as shown in table 2.3, section 2.4 of chapter 2. Conversely, no prior research within non-Pakistan literature on SME businesses discussed firm value as a determinant of the financial derivatives' usage as shown in table 2.9, section 2.6 of chapter 2.

In this research finding six (6) interviewees verified firm value as a determinant of financial derivatives' usage as discussed in research issue 1, section 4.3.1 of chapter 4, which is similar with the past literature. Thus, firm value as a determinant of the financial derivatives' usage within SME businesses in Pakistan is confirmed to be included in the theoretical framework of this research because as firm value increases, it increases the firm capacity to take risks, absorb risk due to which firms get engaged in the usage of financial derivatives if these firms do not have capacity to absorb risk these will not move towards the usage of financial derivatives.

Conclusion 1.1 (11): *Interest rate exposure* as a determinant of the financial derivatives' usage within SME businesses in Pakistan. The eleventh conclusion is related to *interest rate exposure* which could be the determinant of the financial derivatives' usage within Pakistan SME businesses. This determinant was discussed in the non-Pakistan general businesses literature on financial derivatives' usage (Hentschel & Kothari, 2001; Zhang, 2009) as shown in table 2.3, section 2.4 of chapter 2. Moreover, the same phenomenon on this determinant was also found in non-Pakistan literature on SME businesses (Fantini, 2014) as shown in table 2.9, section 2.6 of chapter 2.

As discussed in the findings of this research issue 1 in chapter 4 section 4.3.1, this determinant is verified by eight (8) interviewees. Therefore, interest rate exposure as a determinant of the financial derivatives' usage within SME businesses in Pakistan is confirmed to be included in the theoretical framework of this research because in Pakistan there are fluctuations in interest rate due to political instability and economic downturns of the country and depreciation in currency which force State Bank to increase or decrease the interest rate. Therefore, in order to keep their side safe from interest rate fluctuations firms use financial derivatives by utilizing swaps contracts with their counterparties to mitigate their risk arising from interest rate fluctuations.

Conclusion 1.1 (12): *Liquidity* as a determinant of the financial derivatives' usage within SME businesses in Pakistan. The twelfth conclusion is related to *liquidity* which could be the determinant of the financial derivatives' usage within Pakistan SME businesses. This determinant was discussed in the non-Pakistan general businesses literature on financial derivatives' usage (Nguyen & Faff, 2002; Heaney & Winata, 2005; Bartram et al., 2009 and Nguyen & Faff, 2003) as shown in table 2.3, section 2.4 of chapter 2. Furthermore, the same trend on this determinant was also found in non-Pakistan literature on SME businesses (Fantini, 2014) as shown in table 2.9, section 2.6 of chapter 2.

As described in the findings of this research issue 1 in section 4.3.1 of chapter 4, this determinant is verified by eleven (11) interviewees. Therefore, liquidity as a determinant of the financial derivatives' usage within SME businesses in Pakistan is confirmed to be included in the theoretical framework of this research because when firms need to maintain their liquidity position to meet their short term obligations. Firms engage themselves in short term financial derivatives contracts to fulfil their liquidity requirements.

Conclusion 1.1 (13): *Agency cost* as a determinant of the financial derivatives' usage within SME businesses in Pakistan. Next, the thirteenth conclusion is related to *agency* *cost* which could be the determinant of the financial derivatives' usage within SME businesses in Pakistan. Agency cost was discussed in non-Pakistan literature on general businesses as a determinant of the financial derivatives' usage (Aretz et al., 2007; Fauver & Naranjo, 2010) as shown in table 2.3, section 2.4 of chapter 2. On the other hand, no prior research had discussed agency cost as a determinant of the financial derivatives' usage within non-Pakistan literature on SME businesses.

In turn, in the findings of this research issue 1, section 4.3.1 of chapter 4, this determinant is verified by one interviewee. Thus, agency cost as the determinant of the financial derivatives' usage within SME businesses in Pakistan is confirmed to be included in the theoretical framework of this research because when there is conflict of interest between shareholders and management it means there is possibility of agency cost to be occurred. Therefore, management of the firm taking the benefit of asymmetry information they engage themselves in financial derivatives' contracts to minimize the possibility of any agency cost.

Conclusion 1.1 (14): *High corporate governance* as a determinant of the financial derivatives' usage within SME businesses in Pakistan. The fourteenth conclusion is about *high corporate governance* which could be the determinant of the usage of the financial derivatives within Pakistan SME businesses. From the non-Pakistan literature in general businesses, high corporate governance was discussed as a determinant of the usage of the financial derivatives (Rossi, 2013; Fauver & Naranjo, 2010) as shown in table 2.3, section 2.4 of chapter 2. On the contrary, no prior research had discussed high corporate governance as a determinant of the financial derivatives' usage within non-Pakistan literature on SME businesses.

High corporate governance has been verified in this research by four (4) interviewees from SME businesses in Pakistan as a determinant of the financial derivatives' usage as shown in section 4.3.1 of chapter 4. This finding is very consistent with the literature of this research. Therefore, high corporate governance as a determinant of the financial derivatives' usage in Pakistan SME businesses is confirmed to be included in the theoretical framework of this research because tight corporate regulations bind the counterparties to fulfill their obligation to mature financial derivatives contracts due to which usage of financial derivatives increases. On the other hand, if there are weak corporate governance regulations counterparties remain reluctant about the maturity of the contract, that keep firms away from engaging with more financial derivatives' contracts.

Conclusion 1.1 (15): *Risk attitude* as a determinant of the financial derivatives' usage in Pakistan SME businesses. The fifteenth conclusion is related to the *risk attitude* of the top management which could be the determinant of the financial derivatives' usage within SME businesses in Pakistan. The synthesisation of non-Pakistan literature on SME businesses only discussed risk attitude as the determinant of the financial derivatives' (Pennings & Garcia, 2004) as shown in table 2.9, section 2.6 of chapter 2.

In the findings of this research, four (4) interviewees verified risk attitude as the determinant of the usage of the financial derivatives within SME businesses in Pakistan as shown in section 4.3.1 of chapter 4. Therefore, risk attitude as a determinant of the financial derivatives' usage within SME businesses in Pakistan is confirmed to be included in the theoretical framework of this research because risk attitude is behavioral factor which is directly linked with the decision making authority. If the decision maker attitude is to take risk then he or she engages his or her firm with the financial derivatives' contracts to mitigate risk exposure of the firms and vice versa.

Conclusion 1.1 (16): *Risk perception* as a determinant of the financial derivatives' usage in Pakistan SME businesses. The sixteenth conclusion is related to *risk perception* which could be the determinant of the financial derivatives' usage within Pakistan SME businesses. This determinant was explained in non-Pakistan literature on SME businesses only (Pennings & Garcia, 2004) as shown in table 2.9, section 2.6 of chapter 2.

In the findings of this research issue 1 in section 4.3.1 of chapter 4, risk perception is verified as a determinant of the financial derivatives' usage by three (3) interviewees. Therefore, risk perception as a determinant of the financial derivatives' usage within SME businesses in Pakistan is confirmed to be included in the theoretical framework of this research because if a firm or the decision maker authority perception regarding the usage of financial derivatives is positive it directly get involved in the usage of financial derivatives otherwise it is difficult to take risk by involving themselves in using financial derivatives.

Conclusion 1.1 (17): *Decision making unit* as a determinant of the financial derivatives' usage within SME businesses in Pakistan. Next, the seventeenth conclusion is linked with *decision making unit* which could be the determinant of the financial derivatives' usage within SME businesses in Pakistan. Decision making unit was discussed as a determinant of the financial derivatives' usage in non-Pakistan literature on SME businesses only (Pennings & Garcia, 2004) as show in table 2.9, section 2.6 of chapter 2.

In this research finding one Chief Financial Officer verified decision making unit as a determinant of the financial derivatives' usage in the SME businesses in Pakistan in research issue 1, section 4.3.1 of chapter 4, which is similar to the past literature. Thus, decision making unit as a determinant of the financial derivatives' usage within SME businesses in Pakistan is confirmed to be included in the theoretical framework of this research because decision making units are the services firms which provide their consultancy services to the SMEs whether to engage in the usage of financial derivatives or not. If decision making units suggest the firms to involve in financial derivatives then these firms try get engaged in financial derivatives' contracts otherwise not.

Conclusion 1.1 (18): Lack of awareness as a determinant of the financial derivatives' usage within SME businesses in Pakistan. The eighteenth conclusion is about *exchange* *rate exposure* which could be the determinant of the financial derivatives' usage within Pakistan SME businesses. The existing non-Pakistan SME businesses literature only discussed lack of awareness as a determinant of the financial derivatives' usage (Bank & Weisner, 2012) as shown in table 2.9, section 2.6 of chapter 2.

Thus, this research finding as explained in research issue 1, section 4.3.1 of chapter 4, six (6) interviewees' verified lack of awareness as a determinant of the financial derivatives' usage. Therefore, this finding is similar to the past literature. Thus, lack of awareness as a determinant of the financial derivatives' usage within SME businesses in Pakistan is confirmed to be included in the theoretical framework of this research because if the firm and its management is fully aware about the pros and cons of the usage of financial derivatives then these firms start using financial derivatives otherwise they are reluctant to use financial derivatives.

Conclusion 1.1 (19): *Lack of expertise* as a determinant of the financial derivatives' usage within SME businesses in Pakistan. The nineteenth conclusion is related to *lack of expertise* which could be the determinant of the financial derivatives' usage within Pakistan SME businesses. This determinant was discussed in the non-Pakistan literature on SME businesses only (Bank & Weisner, 2012) as shown in table 2.9, section 2.6 of chapter 2.

As described in the findings of this research issue 1 in section 4.3.1 of chapter 4, lack of expertise is verified by six (6) interviewees as the determinant of the financial derivatives' usage. Therefore, lack of expertise as a determinant of the financial derivatives' usage within SME businesses in Pakistan is confirmed to be included in the theoretical framework of this research because the expertise of management of the firms matter a lot while using financial derivatives. If they lack expertise they do not try to get engaged with the financial derivatives and vice versa.

Summary of the conclusion 1.1 for this research issue 1. The first issue of this research was related to the determinants of the financial derivatives' usage within SME businesses in Pakistan. The nineteen (19) determinants of the usage of financial derivatives are confirmed in this research, explained above are: firm size, leverage, cash flow volatility, management incentives, growth opportunities, financial distress cost, reduction in taxes, risk reduction, exchange rate exposure, firm value, interest rate exposure, liquidity, agency cost, high corporate governance, risk attitude, risk perception, decision making unit, lack of awareness, lack of expertise.

Conclusion 1.2 (1): *Time horizon* as a determinant of the financial derivatives' usage within SME businesses in Pakistan. The first conclusion is about the *time horizon* which could be the determinant of the financial derivatives' usage within Pakistan SME businesses. According to the best of researcher's knowledge this determinant has not been discussed in any of previous research as a determinant of the financial derivatives' usage particularly in SME businesses in Pakistan.

The participant argued that time horizon means time limit while planning for the evaluation of usage of financial derivatives. First, at what time we should move toward financial derivatives' contracts. Moreover, whether it would be beneficial for lone time or only for short time and at what time firm should use them because if firms make decision at proper time and it would improve the firm performance. Therefore, time horizon influences financial controllers' decisions to use financial derivatives that's why this factor cannot be ignored.

Time horizon has been emerged in this research as a valid determinant of the financial derivatives' usage within SME businesses as discussed in section 4.3.1 of chapter 4. Thus, this *newly discovered* determinant is confirmed to be included in the theoretical framework of this research and considered as a new contribution to the body of knowledge.

Conclusion 1.2 (2): *Un-invested cash* as a determinant of the financial derivatives' usage within SME businesses in Pakistan. The second conclusion is related to *un-invested cash* which could be the determinant of the financial derivatives' usage within SME businesses in Pakistan. According to the best of researcher's knowledge this determinant has not been discussed in the previous research including both Pakistan and non-Pakistan literature on SME businesses.

The interviewee explained that the available reserves of firms in form of cash are called un-invested cash. This un-invested cash can be used for future contracts where initial margin is required to lock the risk of heavy amount in some future date. According to the participant when firm enters into financial derivatives contracts by using un-invested cash it also extends the borrowing capacity of the firm from financial institutions. Therefore, financial officers consider it important that can influence their decision to use financial derivatives.

This determinant is emerged in this research as a valid determinant of the financial derivatives' usage within SME businesses in Pakistan. This determinant serves to extend the past literature as shown in section 4.3.1 of chapter 4. Thus, this *newly discovered* determinant is confirmed to be included in the theoretical framework of this research and considered as an addition in the existing body of literature.

Conclusion 1.2 (3): *Reduction in overall cost* as a determinant of the financial derivatives' usage within SME businesses in Pakistan. *Reduction in overall cost* is the third determinant, which could be the determinant of the financial derivatives' usage within SME businesses in Pakistan. According to the best of researcher's knowledge, none of the previous research provided any evidence about its association with the usage of the financial derivatives in non-Pakistan literature on SME businesses.

While arguing, participant explained that when firms make more and more financial derivatives' contracts their cost reduces this cost might be in different forms for instance cost reduction on the imported raw material which was bought utilizing financial derivatives' contracts. Such types of collective cost are reduced by employing the financial derivatives contracts cover the large part of overall cost of the firm which force financial officers to evaluate and consider this determinant before moving toward the usage of financial derivatives.

Reduction in overall cost, a newly discovered determinant is emerged as a valid determinant of the financial derivatives' usage within Pakistan SME businesses. This is an extension in the existing literature as described comprehensively in section 4.3.1 of chapter 4. Thus, this *newly discovered* determinant is confirmed to be included in the theoretical framework of this research and considered as a new contribution in the existing literature.

Conclusion 1.2 (4): *Risk appetite* as a determinant of the financial derivatives' usage within SME businesses in Pakistan. The fourth determinant is *risk appetite*. It has been confirmed from this study that risk appetite is the determinant of the usage of the financial derivatives within SME businesses in Pakistan. According to the best of researcher's knowledge, this determinant has not been discussed in non-Pakistan literature in SME businesses.

According to the arguments of participants, risk appetite is actually the capacity of the firm to absorb risk because sometimes financial derivatives' contracts benefits could reverse and become the loss of the firm. While making decision to use financial derivatives, financial experts evaluate the firm capacity to absorb loss which might happen due to uncertainty in financial derivatives' contracts at their maturity. Therefore, those firms which have high risk appetite they have more chances to move towards the usage of financial derivatives and vice versa.

The findings of this research emerged risk appetite as a valid determinant of the financial derivatives' usage within SME businesses in Pakistan. This is explained in section 4.3.1 of chapter 4. Therefore, this *newly discovered determinant* is confirmed to be included in the theoretical framework of this research and considered a new contribution in the existing body of knowledge.

Conclusion 1.2 (5): *Lack of established market* as a determinant of the financial derivatives' usage within SME businesses in Pakistan. The last and fifth conclusion is about the *lack of established market* a *newly discovered* determinant of the usage of the financial derivatives within SME businesses in Pakistan. According to the best of researcher's knowledge, lack of established market is not discussed in the non-Pakistan literature in SME businesses.

The participant explained that the availability of established trading counters for financial derivatives is very important to expand their usage. The more trading counters in form of future markets are available the more usage of financial derivatives. The unavailability of trading counters keeps firms away from financial derivatives contracts. In Pakistan, the lack of established trading counters or markets of financial derivatives force chief financial officers to think before going toward the usage of financial derivatives.

The finding of this research emerged lack of established market a newly discovered determinant as discussed in section 4.3.1 of chapter 4. Consequently, this *newly discovered* determinant of the financial derivatives' usage within SME businesses in Pakistan is confirmed to be included in theoretical framework of this research and considered as a new contribution in the existing literature.

Summary of the conclusion 1.2 for this research issue 1. The first issue of this research was related to the determinants of the financial derivatives' usage within SME businesses in Pakistan. Five *newly emerging* determinants of the financial derivatives' usage are time horizon, un-invested cash, reduction in cost, risk appetite, lack of established market as described above. Therefore, total twenty four (24) determinants are found to be the part of complete list of determinants of the financial derivatives' usage within SME businesses in Pakistan as shown in table 5.1, research issue 1. The following section presents the conclusions on the research issue 2.

5.1.2 Conclusion about research 2: What are the core financial determinants for the SME businesses in Pakistan to use financial derivatives?

Research issue 2 focused on the core financial determinants of the financial derivatives' usage within SME businesses in Pakistan. Two main conclusions from the findings on research issue 2are sketched as shown in table 5.1, conclusion 2.1 and 2.2 respectively. At the end, summary of conclusion 2.1 and 2.2 for research issue 2 is given. Each determinant is discussed in detail below.

Conclusion 2.1 (1): *Firm size* as a core financial determinant of the financial derivatives' usage within Pakistan SME businesses. The first conclusion is related to *firm size which* could be the core financial determinant of the financial derivatives' usage within Pakistan SME businesses. The literature had discussed firm size as the determinant of the financial derivatives' usage (conclusion 1.1 (1), section 5.1.1). Both non-Pakistan literature in general businesses and non-Pakistan literature in SME businesses did not discussed firm size as a core determinant of the financial derivatives' usage. However, in the preliminary theoretical framework (refer figure 2.6, section 2.10 of chapter 2), firm size had been categorized as a core financial determinant of the financial derivatives' usage.

This research findings verified firm size as a core financial determinant in research issue 2, section 4.3.2 of chapter 4and supported the preliminary theoretical framework of this research. Based on this conclusion, firm size as a core financial determinant of the financial derivatives' usage within Pakistan SME businesses is confirmed to be included in the theoretical framework of this research. Thus, this research contributes significantly to the existing knowledge on financial derivatives' usage by proving that firm size is a core financial determinant.

Conclusion 2.1 (2): *Leverage* as a core financial determinant of the financial derivatives' usage within Pakistan SME businesses. The second conclusion is related to *leverage* which could be the core financial determinant of the financial derivatives' usage within Pakistan SME businesses. The literature had discussed leverage as the determinant of the financial derivatives' usage (conclusion 1.1 (2), section 5.1.1). Earlier, in the preliminary theoretical framework, leverage was identified as a core financial determinant of the financial derivatives' usage as shown in figure 2.6, section 2.10 of chapter 2.

Based on the findings of this research, leverage is verified as a core financial determinant of the financial derivatives' usage in research issue 2, section 4.3.2 of chapter 4. This is supporting the preliminary theoretical framework of this research. Therefore leverage as a core financial determinant of the financial derivatives' usage within SME businesses in Pakistan is confirmed to be included in the preliminary theoretical framework of this research. Hence, this research contributes significantly to the existing literature.

Conclusion 2.1 (3): ***Exchange rate exposure*** **as a core financial determinant of the financial derivatives' usage within Pakistan SME businesses.** The third conclusion is related to *exchange rate exposure* which could be the core financial determinant of the financial derivatives' usage within Pakistan SME businesses. There had been empirical examination in general businesses literature about exchange rate exposure as a determinant of the financial derivatives' usage (conclusion 1.1 (9), section 5.1.1) but none of the study in the non-Pakistan literature in general businesses and in non-Pakistan SME businesses literature discussed exchange rate exposure as the core financial determinant of the financial derivatives' usage. However, in the preliminary theoretical framework (refer figure 2.6, section 2.10 of chapter 2), exchange rate exposure was categorized as a core financial determinant of the financial derivatives' usage.

This research findings verified exchange rate exposure as a core financial determinant in research issue 2, section 4.3.2 of chapter that supports the preliminary theoretical framework of this research. As such, exchange rate exposure as a core financial determinant of the usage of the financial derivatives within the Pakistan SME businesses is confirmed to be included in the theoretical framework of this research. Therefore, this research contributes to the existing knowledge by providing the evidence that exchange rate exposure is a core financial determinant of the usage of financial derivatives.

Conclusion 2.1 (4): *Interest rate exposure* as a core financial determinant of the financial derivatives' usage within SME businesses in Pakistan. The fourth conclusion is related to *interest rate exposure* which could be the core financial determinant of the financial derivatives' usage within Pakistan SME businesses. The literature described interest rate exposure as a determinant of the financial derivatives' usage (refer conclusion 1.1 (11), section 5.1.1) but none of the literature in general businesses and literature in SME businesses on financial derivatives' usage discussed interest rate exposure as a core financial determinant of the financial derivatives' usage. However, in the preliminary theoretical framework (refer figure 2.6, section 2.10 of chapter 2), interest rate exposure was categorized as the core financial determinant of the financial derivatives' usage.

This research findings verified interest rate exposure as a core financial determinant (refer description in research issue 2, section 4.3.2 of chapter 4) which supported the preliminary theoretical framework of this research. Based on conclusion, interest rate exposure as a core financial determinant of the financial derivatives' usage within Pakistan SME businesses is confirmed to be included in the theoretical framework of this research. Therefore, this research contributes significantly to the existing body of knowledge on financial derivatives' usage by providing evidence that interest rate exposure is a core financial determinant.

Conclusion 2.1 (5): *Liquidity* as a core financial determinant of the financial derivatives' usage within Pakistan SME businesses. The fifth conclusion is related to *liquidity* which could be the core financial determinant of the financial derivatives' usage within Pakistan SME businesses. The non-Pakistan literature discussed liquidity as a determinant of the financial derivatives' usage (conclusion 1.1 (12), section 5.1.1). However, in the preliminary theoretical framework (refer figure 2.6, section 2.10 of chapter 2), liquidity was categorized as a core financial determinant of the financial derivatives' usage.

Based on the findings of this research, liquidity is verified as a core financial determinant (refer discussion in research issue 2, section 4.3.2 of chapter 4) which supported the preliminary theoretical framework of this research. Hence, this research contributed significantly to the existing literature by identifying liquidity as a core financial determinant of the financial derivatives' usage. Therefore, liquidity as a core financial determinant of the financial derivatives' usage within SME businesses in Pakistan is confirmed to be included in the preliminary theoretical framework of this research.

Summary of the conclusion 2.1 for research issue 2. The aforesaid conclusion 2.1 was dedicated to the core financial determinants of the financial derivatives' usage. These research findings confirmed both the synthesised literature and the preliminary theoretical framework. They therefore verified that these five determinants (firm size, leverage, exchange rate exposure, interest rate exposure and liquidity) are the core financial determinants of the financial derivatives' usage within SME businesses in Pakistan.

Conclusion 2.2 (1): *Un-invested cash* as a core financial determinant of the financial derivatives' usage within SME businesses in Pakistan. This conclusion is related to *un-invested cash* which could be the core financial determinant of the financial derivatives' usage within Pakistan SME businesses. According to the best of researcher's knowledge, none of the prior research discussed un-invested cash as a core financial determinant of the usage of financial derivatives in non-Pakistan SME businesses. Consequently, this determinant was not classified either a core financial or non-core financial determinant in the preliminary theoretical framework.

The interviewee explained that the available reserves of firms in form of cash are called un-invested cash. This un-invested cash can be used for future contracts where initial margin is required to lock the risk of heavy amount in some future date. According to the participant when firm enters into financial derivatives contracts by using un-invested cash it also extends the borrowing capacity of the firm from financial institutions. Therefore, financial officers consider it important that can influence their decision to use financial derivatives.

This research findings on the determinants of the financial derivatives' usage however emerged un-invested cash as a core financial determinant (refer discussion in research issue 2, section 4.3.2 of chapter 4). Therefore, un-invested cash as a *newly discovered* core financial determinant of the financial derivatives' usage within SME businesses in Pakistan is confirmed to be included in theoretical framework of this research and considered as a new contribution in the existing literature.

Summary of the conclusion 2.2 for research issue 2. The aforesaid conclusion 2.2 was dedicated to newly emerged core financial determinant of the financial derivatives' usage. In this research finding one *new* financial determinant (un-invested cash) has been identified as a core determinant of the financial derivatives' usage within SME businesses in Pakistan. This is an addition in the existing body of knowledge of the financial derivatives' usage. The following section would explain the conclusion of the non-core financial determinant of the financial derivatives' usage.

5.1.3 Conclusion about research issue 3: What are the non-core financial determinants for the SME businesses in Pakistan to use financial derivatives?

In the previous section, conclusions about research issue 2 of this research have been drawn and discussed in respect of core financial determinants. This section focuses on the conclusions drawn in context of non-core financial determinants from research issue 3. Research issue 3 draws conclusions on the non-core financial determinants of the financial derivatives' usage within Pakistan SME businesses. The major conclusion could be taken from the findings of research issue 3 as presented in table 5.1, conclusion 3.1.

From the findings, two main conclusions (conclusion 3.1 and 3.2) are drawn about this research issue 3.

Conclusion 3.1 (1): *Cash flow volatility* as a non-core financial determinant of the financial derivatives' usage within Pakistan SME businesses. The first conclusion is related to *cash flow volatility* which could be the non-core financial determinant of the financial derivatives' usage within Pakistan SME businesses. The empirical examination in literature discussed cash flow volatility as a determinant of the financial derivatives' usage(refer conclusion 1.1 (3), section 5.1.1) but none of the literature in general businesses and in non-Pakistan SME businesses discussed cash flow volatility as the non-core financial determinant of the financial derivatives' usage. Though, in the preliminary theoretical framework (refer figure 2.6, section 2.10 of chapter 2), cash flow volatility was categorized as a non-core financial determinant of the financial derivatives' usage.

This research findings verified cash flow volatility as a non-core financial determinant (refer explanation in research issue 3, section 4.3.3 of chapter 4), which supported the preliminary theoretical framework of this research. Based on this conclusion, cash flow volatility as a non-core financial determinant of the financial derivatives' usage within the Pakistan SME businesses is confirmed to be included in the theoretical framework of this research. Thus, this research contributes significantly by adding to the existing knowledge on financial derivatives' usage by identifying cash flow volatility as a non-core financial determinant.

Conclusion 3.1 (2): *Financial distress cost* as a non-core financial determinant of the financial derivatives' usage within Pakistan SME businesses. The second conclusion is related to *financial distress cost* which could be the non-core financial determinant of the financial derivatives' usage within Pakistan SME businesses. The literature in business discussed financial distress cost as a determinant of the financial derivatives' usage (conclusion 1.1 (2), section 5.1.1) but none of the literature in general businesses and in non-Pakistan SME businesses discussed financial distress cost specifically as a non-core financial determinant of the financial derivatives' usage. However, in the preliminary theoretical framework (refer figure 2.6, section 2.10 of chapter 2), financial distress cost was characterized as a non-core financial determinant of the financial derivatives' usage.

Based on the findings of this research, financial distress cost is verified as a non-core financial determinant (refer discussion in research issue 3, section 4.3.3 of chapter 4) that supported the preliminary theoretical framework of this research. Financial distress cost as the non-core financial determinant of the financial derivatives' usage within SME businesses in Pakistan is confirmed to be included in the preliminary theoretical framework of this research. Hence, this research contributes significantly to the existing literature by identifying financial distress cost as a non-core financial determinant of the financial derivatives' usage.

Conclusion 3.1 (3): *Reduction in taxes* as a non-core financial determinant of the financial derivatives' usage within Pakistan SME businesses. The third conclusion is related to *reduction in taxes* which could be the non-core financial determinant of the financial derivatives' usage within Pakistan SME businesses. The empirical examination in literature in business discussed reduction in taxes as a determinant of the financial derivatives' usage (conclusion 1.1 (7), section 5.1.1) but none of the literature in general businesses and in non-Pakistan SME businesses discussed reduction in taxes specifically as the non-core financial determinant of the financial derivatives' usage. Though, in the preliminary theoretical framework (refer figure 2.6, section 2.10 of chapter 2), reduction in taxes was categorized as the non-core financial determinant of the financial derivatives' usage.

In the findings of this research, reduction in taxes is verified as a non-core financial determinant (refer explanation in research issue 3, section 4.3.3 of chapter 4) which supported the preliminary theoretical framework. Thus, reduction in taxes as a non-core financial determinant of the usage of financial derivatives within the Pakistan SME businesses is confirmed to be included in the theoretical framework of this research. Therefore, this research contributes to the existing knowledge by providing the evidence that reduction in taxes is a non-core financial determinant of the usage of the financial derivatives.

Conclusion 3.1 (4): *Firm value* as a non-core financial determinant of the financial derivatives' usage within Pakistan SME businesses. The fourth conclusion is related to *firm value* which could be the non-core financial determinant of the financial derivatives' usage within Pakistan SME businesses. The empirical examination in literature in business discussed firm value as a determinant of the financial derivatives' usage (conclusion 1.1 (10), section 5.1.1), but none of the literature in general businesses and non-Pakistan SME businesses discussed firm value as non-core financial determinant of the financial derivatives' usage. However, in the preliminary theoretical framework, firm value was categorized as a non-core financial determinant of the financial derivatives' usage.

Based on the findings of this research, firm value is verified as a non-core financial determinant (refer discussion in research issue 3, section 4.3.3 of chapter 4), which supported the preliminary theoretical framework of this research. Therefore, firm value as a non-core financial determinant of the financial derivatives' usage within SME businesses in Pakistan is confirmed to be included in the preliminary theoretical framework of this research. Hence, this research has contributed significantly to the existing literature by providing evidence that firm value is a non-core financial determinant of the financial derivatives' usage.

Conclusion 3.1 (5): *Agency cost* as a non-core financial determinant of the financial derivatives' usage within Pakistan SME businesses. The fifth conclusion is related to *agency cost* which could be the non-core financial determinant of the financial derivatives' usage within Pakistan SME businesses. The empirical evidence in literature in business discussed agency cost as a determinant of the financial derivatives' usage (refer conclusion 1.1 (13), section 5.1.1) but none of the literature on general businesses and non-Pakistan literature on SME businesses discussed agency cost specifically as a non-core financial determinant of the financial derivatives' usage. However, in the preliminary theoretical framework (refer figure 2.6, section 2.10 of chapter 2), agency cost was categorized as a non-core financial determinant of the financial derivatives' usage.

This research findings verified agency cost as anon-core financial determinant (refer explanation in research issue 3, section 4.3.3 of chapter 4), which supported the preliminary theoretical framework of this research. Based on this conclusion, agency cost as a non-core financial determinant of the financial derivatives' usage within Pakistan SME businesses is confirmed to be included in the theoretical framework of this research. Thus, this research contributes significantly to the existing knowledge on financial derivatives' usage by providing evidence that agency cost is a non-core financial determinant.

Summary of the conclusion 3.1 for research issue 3. The above mentioned conclusion 3.1 was dedicated to the non-core financial determinants of the financial derivatives' usage. This research findings acknowledged both the synthesised literature and the preliminary theoretical framework. It has been confirmed that these five determinants (cash flow volatility, financial distress cost, reduction in taxes, firm value and agency cost) are non-core financial determinants of the financial derivatives' usage within SME businesses in Pakistan.

Conclusion 3.2 (1): *Reduction in overall cost* as a non-core financial determinant of the financial derivatives' usage within SME businesses in Pakistan. This conclusion is related to *reduction in overall cost* which could be the non-core financial determinant of the financial derivatives' usage within Pakistan SME businesses. According to the best of researcher's knowledge, none of the prior research discussed reduction in overall cost as a financial determinant of financial derivatives' usage. In addition, this determinant was also not classified either core financial or the non-core financial determinant in the preliminary theoretical framework.

While arguing, participant explained that when firms make more and more financial derivatives' contracts their cost reduces this cost might be in different forms for instance cost reduction on the imported raw material which was bought utilizing financial derivatives' contracts. Such types of collective cost are reduced by employing the financial derivatives contracts cover the large part of overall cost of the firm which force financial officers to evaluate and consider this determinant before moving toward the usage of financial derivatives.

This research findings on the determinants of the financial derivatives' usage emerged reduction in overall cost as a non-core financial determinant (refer discussion in research issue 3, section 4.3.3 of chapter 4). Thus, being *newly discovered* non-core financial determinant of the financial derivatives' usage is confirmed to be included in the theoretical framework of this research. Hence, this research findings make a contribution to the existing knowledge on the non-core financial determinant of the financial derivatives' usage within Pakistan SME businesses.

Summary of the conclusion 3.2 for research issue 3. The above mentioned conclusion 3.2 dedicated to the non-core financial determinants of the financial derivatives' usage. This research emerged a new non-core financial determinant (i.e. reduction in overall cost) of the financial derivatives' usage within SME businesses in Pakistan. This is an addition in the existing body of knowledge on financial derivatives' usage. The subsequent section explains the conclusion of the core non-financial determinant on the financial derivatives' usage.

5.1.4 Conclusion about research issue 4: What are the core non-financial determinants for the SME businesses in Pakistan to use financial derivatives?

Previous section drawn and discussed conclusions about research issue 3 in respect of core non-financial determinants. This section discusses the conclusions drawn in respect of core non-financial determinants from research issue 4. Research issue 4 draws conclusions on the core non-financial determinants of the financial derivatives' usage within SME businesses in Pakistan. The decisive issues taken from the findings of research issue 4 are presented in table (5.1), entitled, "conclusion 4.1". Conclusion 4.1 contains two (2) core non-financial determinants on the financial derivatives' usage within SME businesses in Pakistan.

Conclusion 4.1 (1): *Growth Opportunities* as a core non-financial determinant of the financial derivatives' usage within Pakistan SME businesses. The first conclusion is related to *growth opportunities* which could be the core non-financial determinant of the financial derivatives' usage within Pakistan SME businesses. The literature in business explained growth opportunities as a determinant of the financial derivatives' usage (refer conclusion 1.1 (5), section 5.1.1), but none of the literature in general businesses and non-Pakistan SME businesses literature discussed growth opportunities as a core non-financial determinant of the financial derivatives' usage. However, in the preliminary theoretical framework, growth opportunities was categorized as a core non-financial determinant of the financial derivatives' usage (refer figure 2.6, section 2.10 of chapter 2).

The findings of this research verified growth opportunities as a core non-financial determinant (refer explanation in research issue 4, section 4.3.4 of chapter 4) and supported the preliminary theoretical framework of this research. Based on this conclusion, growth opportunity as a core non-financial determinant of the financial derivatives' usage within Pakistan SME businesses is confirmed to be included in the theoretical framework of this research. Therefore, this research contributes significantly to the existing knowledge on financial derivatives' usage by providing evidence that growth opportunity is a core non-financial determinant.

Conclusion 4.1 (2): *Risk reduction* as a core non-financial determinant of the financial derivatives' usage within Pakistan SME businesses. The second conclusion is related to *risk reduction* which could be the core non-financial determinant of the financial derivatives' usage within Pakistan SME businesses. The empirical literature in business discussed risk reduction as a determinant of the financial derivatives' usage (conclusion 1.1 (8), section 5.1.1) but none of the literature in general businesses and in non-Pakistan SME businesses literature discussed risk reduction as the core non-financial determinant of the financial derivatives' usage. However, in the preliminary theoretical framework of this research, risk reduction was characterized as a non-core financial determinant of the financial derivatives' usage (refer figure 2.6, section 2.10 of chapter 2).

Based on the findings of this research, risk reduction is verified as a core non-financial determinant (refer discussion in research issue 4, section 4.3.4 of chapter 4) and supported the preliminary theoretical framework of this research. Hence, this research contributes significantly to the existing body of knowledge, mentioning that risk reduction is the core non-financial determinant of the financial derivatives' usage. As a result, risk reduction as the core non-financial determinant of the financial derivatives' usage within SME businesses in Pakistan is confirmed to be included in the preliminary theoretical framework of this research.

Summary of the conclusion 4.1 for research issue 4. The summary for the second research issue underlines its concerns on the core non-financial determinants of the financial derivatives' usage within SME businesses in Pakistan. The two core non-financial determinants discussed above namely growth opportunities and risk reduction were found to be part of a comprehensive list of the financial derivatives' usage within

SME businesses in Pakistan (refer table 5.2). The emphasis is that no other previous research had explored the core non-financial determinants of the financial derivatives' usage within SME businesses in Pakistan.

5.1.5 Conclusion about research issue 5: What are the non-core, non-financial determinants for the SME businesses in Pakistan to use financial derivatives?

The previous section discussed the conclusion about research issue 4. This section focused on the non-core, non-financial determinants of the financial derivatives' usage within SME businesses in Pakistan. Two main conclusions from the findings on research issue 5 are drawn, as shown in the table 5.1, conclusion 5.1 and conclusion 5.2 respectively. At the end, summary of conclusion 5.1 and 5.2 for research issue 5 is given. Each determinant is discussed in detail below.

Conclusion 5.1 (1): *Management incentives* as a non-core, non-financial determinant of the financial derivatives' usage within Pakistan SME businesses. The first conclusion is related to *management incentives* which could be the non-core, non-financial determinant of the financial derivatives' usage within Pakistan SME businesses. The non-Pakistan literature on general business discussed management incentives as determinant of the financial derivatives' usage(refer conclusion 1.1 (4), section 5.1.1) but non-Pakistan literature on SME businesses on financial derivatives' usage did not confirm this determinant as a determinant of the financial derivatives' usage. However, management incentive was categorized as a non-core, non-financial determinant of the financial derivatives' usage in the preliminary theoretical framework of this research (refer figure 2.6, section 2.10 of chapter 2).

This research findings verified management incentives as a non-core, non-financial determinant of the financial derivatives' usage (refer explanation in research issue 5, section 4.3.5 of chapter 4), which supported the preliminary theoretical framework of this research. Based on this conclusion, management incentives as a non-core, non-financial determinant of the financial derivatives' usage within SME businesses in Pakistan is confirmed to be included in the theoretical framework of this research. Thus, this research contributes significantly to the existing body of knowledge on financial derivatives' usage by proving that management incentive is a non-core, non-financial determinant.

Conclusion 5.1 (2): *High corporate governance* as a non-core, non-financial determinant of the financial derivatives' usage within Pakistan SME businesses. Next, the second conclusion is related to *high corporate governance* which could be the non-core, non-financial determinant of the financial derivatives' usage within Pakistan SME businesses. The literature on business discussed high corporate governance as a determinant of the financial derivatives' usage (conclusion 1.1 (14), section 5.1.1). However, in the preliminary theoretical framework (refer figure 2.6, section 2.10 of chapter 2), high corporate governance was characterized as a non-core, non-financial determinant of the financial derivatives' usage (refer figure 2.6, section 2.10 of chapter 2).

Based on the findings of this research, high corporate governance is verified as anon-core, non-financial determinant (refer discussion in research issue 5, section 4.3.5 of chapter 4) which supported the preliminary theoretical framework of this research. In conclusion, high corporate governance as a non-core, non-financial determinant of the financial derivatives' usage within SME businesses in Pakistan is confirmed to be included in the preliminary theoretical framework of this research. Hence, this research has contributes significantly to the existing literature, mentioning that high corporate governance is a non-core, non-financial determinant of the financial derivatives' usage.

Conclusion 5.1 (3): *Risk attitude* as a non-core non-financial determinant of the financial derivatives' usage within Pakistan SME businesses. The third conclusion is related to *risk attitude* which could be the non-core, non-financial determinant of the financial derivatives' usage within Pakistan SME businesses. There has been empirical examination in literature about risk attitude as a determinant of the financial derivatives' usage (conclusion 1.1 (15) section 5.1.1) but none of the literature in general businesses and non-Pakistan literature in SME businesses discussed risk attitude specifically as a non-core, non-financial determinant of the financial derivatives' usage. In the preliminary theoretical framework (refer figure 2.6, section 2.10 of chapter 2), risk attitude was categorized as a non-core, non-financial determinant of the financial derivatives' usage.

This research findings verified risk attitude as a non-core, non-financial determinant (refer explanation in research issue 5, section 4.3.5 of chapter 4) which supported the preliminary theoretical framework. Therefore, risk attitude as a non-core, non-financial determinant of the usage of the financial derivatives within Pakistan SME businesses is confirmed to be included in the theoretical framework of this research. Thus, this research contributes to the existing body of knowledge by providing the evidence that risk attitude is a non-core, non-financial determinant of the usage of the financial derivatives.

Conclusion 5.1 (4): *Risk perception* as a non-core, non-financial determinant of the financial derivatives' usage within Pakistan SME businesses. The fourth conclusion refers to *risk perception* which could be the non-core, non-financial determinant of the financial derivatives' usage within Pakistan SME businesses. The literature in business discussed risk perception as a determinant of the financial derivatives' usage (conclusion 1.1 (16), section 5.1.1) but none of the literature in general businesses and non-Pakistan literature in SME businesses discussed risk attitude specifically as a non-core, non-financial determinant of the financial derivatives' usage. However, in the preliminary theoretical framework, risk perception was characterized as a non-core, non-financial determinant of the financial derivatives' usage (refer figure 2.6, section 2.10 of chapter 2).

Based on the findings of this research, risk perception is verified as a non-core, non-financial determinant (refer discussion in research issue 5, section 4.3.5 of chapter 4), which supported the preliminary theoretical framework of this research. In the conclusion, risk perception as a non-core, non-financial determinant of the financial derivatives' usage within SME businesses in Pakistan is confirmed to be included in the preliminary theoretical framework of this research. Hence, this research contributes significantly to the existing literature by identifying risk perception as a non-core, non-financial determinant of the financial derivatives' usage.

Conclusion 5.1 (5): *Decision Making Unit* as a non-core, non-financial determinant of the financial derivatives' usage within Pakistan SME businesses. The fifth conclusion is related to *decision making unit* which could be the non-core, non-financial determinant of the financial derivatives' usage within Pakistan SME businesses. The empirical literature discussed decision making unit as a determinant of the financial derivatives' usage (refer conclusion 1.1 (17), section 5.1.1) but none of the literature on general businesses and non-Pakistan SME businesses literature on financial derivatives' usage discussed this determinant as a non-core, non-financial determinant. However, in the preliminary theoretical framework, decision making unit was categorized as a non-core, non-financial determinant of the financial derivatives' usage (refer figure 2.6, section 2.10 of chapter 2).

This research findings verified decision making unit as a non-core, non-financial determinant (refer explanation in research issue 5, section 4.3.5 of chapter 4) which supported the preliminary theoretical framework of this research. Based on this conclusion, decision making unit as a non-core, non-financial determinant of the financial derivatives' usage within Pakistan SME businesses is confirmed to be included in the theoretical framework of this research. Thus, this research contributes significantly to the existing body of knowledge on financial derivatives' usage by proving that decision making unit is a non-core, non-financial determinant.

Conclusion 5.1 (6): *Lack of awareness* as a non-core, non-financial determinant of the financial derivatives' usage within Pakistan SME businesses. The sixth conclusion is related to *lack of awareness* which could be the non-core, non-financial determinant of the financial derivatives' usage within Pakistan SME businesses. The empirical examination in literature discussed awareness as a determinant of the financial derivatives' usage (conclusion 1.1 (18), section 5.1.1) but none of the literature in general businesses and non-Pakistan literature in SME businesses discussed lack of awareness as a non-core, non-financial determinant of the financial derivatives' usage. However, in the preliminary theoretical framework (refer figure 2.6, section 2.10 of chapter 2), lack of awareness was categorized as anon-core, non-financial determinant of the financial derivatives' usage.

This research findings verified lack of awareness as the non-core, non-financial determinant (refer explanation in research issue 5, section 4.3.5 of chapter 4) that supported the preliminary theoretical framework. Thus, lack of awareness as anon-core, non-financial determinant of the usage of the financial derivatives within Pakistan SME businesses is confirmed to be included in the theoretical framework of this research. Therefore, this research contributed to the existing literature by providing the evidence that lack of awareness is the non-core, non-financial determinant of the usage of financial derivatives.

Conclusion 5.1 (7): *Lack of expertise* as a non-core, non-financial determinant of the financial derivatives' usage within Pakistan SME businesses. The seventh conclusion is related to *lack of expertise* which could be the non-core, non-financial determinant of the financial derivatives' usage within Pakistan SME businesses. The literature in business discussed lack of expertise as the determinant of the financial derivatives' usage (conclusion 1.1 (19), section 5.1.1) but none of the literature in general businesses and non-Pakistan SME businesses discussed lack of expertise as non-core, non-financial determinant. However, in the preliminary theoretical framework, lack of expertise was characterized as a non-core, non-financial determinant of the financial derivatives' usage (refer figure 2.6, section 2.10 of chapter 2).

Based on the findings of this research, lack of expertise is verified as a non-core, non-financial determinant (refer discussion in research issue 5, section 4.3.5 of chapter 4) which supported the preliminary theoretical framework of this research. In conclusion, lack of expertise as a non-core, non-financial determinant of the financial derivatives' usage within SME businesses in Pakistan is confirmed to be included in the preliminary theoretical framework of this research. Hence, this research contributes significantly to the existing body of knowledge, by identifying lack of expertise as a non-core, non-financial determinant of the financial derivatives' usage.

Summary of the conclusion 5.1 for research issue 5. The aforementioned conclusions were devoted to the non-core, non-financial determinants of the financial derivatives' usage. This research findings confirmed both the synthesised literature and the preliminary theoretical framework. In addition, they confirmed that these seven (7) determinants (management incentives, high corporate governance, risk attitude, risk perception, decision making unit, lack of awareness and lack of expertise) are non-core, non-financial determinants of the financial derivatives' usage within SME businesses in Pakistan.

Conclusion 5.2 (1): *Risk appetite* as a non-core, non-financial determinant of the financial derivatives' usage within SME businesses in Pakistan. This conclusion is related to *risk appetite* which could be the non-core, non-financial determinant of the financial derivatives' usage within Pakistan SME businesses. According to the best of researcher's knowledge, none of the prior research discussed risk appetite as a determinant of the financial derivatives' usage with SME businesses (conclusion 1.2 (4), section 5.1.1). This determinant was also not classified either as a core non-financial or as a non-core, non-financial determinant in the preliminary theoretical framework (refer discussion in research issue 5, section 4.3.5 of chapter 4).

According to the arguments of participants, risk appetite is actually the capacity of the firm to absorb risk because sometimes financial derivatives' contracts benefits could reverse and become the loss of the firm. While making decision to use financial derivatives, financial experts evaluate the firm capacity to absorb loss which might happen due to uncertainty in financial derivatives' contracts at their maturity. Therefore, those firms which have high risk appetite they have more chances to move towards the usage of financial derivatives and vice versa.

This determinant is emerged in the findings of this research as a non-core non-financial determinant of the financial derivatives' usage. Thus, as a *newly discovered* non-core, non-financial determinant of financial derivatives' usage within SME businesses in Pakistan is confirmed to be included in the theoretical framework of this research. Hence, this research findings make contribution to the existing literature on the non-core, non-financial determinants of financial derivatives' usage.

Conclusion 5.2 (2): *Lack of established markets* as a non-core, non-financial determinant of the financial derivatives' usage within SME businesses in Pakistan. This conclusion is related to *lack of established markets* which could be the non-core, non-financial determinant of the financial derivatives' usage within Pakistan SME businesses. According to the best of researcher's knowledge, none of the past research discussed lack of established markets as a determinant of the usage of the financial derivatives in SME businesses (conclusion 1.2 (5), section 5.1.1). This determinant was also not classified either core, non-financial or the non-core, non-financial determinant in the preliminary theoretical framework of this research.

The participant explained that the availability of established trading counters for financial derivatives is very important to expand their usage. The more trading counters in form of future markets are available the more usage of financial derivatives. The unavailability of trading counters keeps firms away from financial derivatives contracts. In Pakistan, the lack of established trading counters or markets of financial derivatives force chief financial officers to think before going toward the usage of financial derivatives.

Therefore, this research finding on determinants of financial derivatives' usage emerged lack of established markets as a non-core, non-financial determinant (refer discussion in research issue 5, section 4.3.5 of chapter 4). Thus, lack of established market as a *newly discovered* non-core, non-financial determinant of financial derivatives' usage within SME businesses in Pakistan is confirmed to be included in the theoretical framework of this research. In essence, this research findings make contribution to the existing body of knowledge on the non-core, non-financial determinants of financial derivatives' usage.

Conclusion 5.2 (3): *Time horizon* as a non-core, non-financial determinant of the financial derivatives' usage within SME businesses in Pakistan. This conclusion is related to *time horizon* which could be the non-core, non-financial determinant of the financial derivatives' usage within Pakistan SME businesses. According to the best of researcher's knowledge, none of the prior research discussed time horizon as a determinant of the usage of the financial derivatives in SME businesses (conclusion 1.2 (1), section 5.1.1). This determinant was also not classified either core, non-financial or the non-core, non-financial determinant in the preliminary theoretical framework of this research.

The participant argued that time horizon means time limit while planning for the evaluation of usage of financial derivatives. First, at what time we should move toward financial derivatives' contracts. Moreover, whether it would be beneficial for lone time or only for short time and at what time firm should use them because if firms make decision at proper time and it would improve the firm performance. Therefore, time horizon influences financial controllers' decisions to use financial derivatives that's why this factor cannot be ignored.

Yet, this research finding on the determinants of the financial derivatives' usage emerged time horizon as a non-core, non-financial determinant (refer discussion in research issue 5, section 4.3.5 of chapter 4). It is thus incorporated as a *newly discovered* non-core, non-financial determinant of financial derivatives' usage in the theoretical framework of this research. Hence, this research findings make contribution to the existing literature on the non-core, non-financial determinants of financial derivatives' usage.

Summary of the conclusion 5.2 for research issue 5. The aforementioned conclusion 5.2 was devoted to the non-core, non-financial determinants of the financial derivatives' usage. This research findings identified three (3) *newly discovered* non-core, non-financial determinants (risk appetite and lack of established markets) on the financial derivatives' usage within SME businesses in Pakistan and considered a new contribution in the body of knowledge of financial derivatives' usage.

In overall summary of findings of all five research issues, it is concluded that total twenty four (24) determinants of the financial derivatives' usage are confirmed of research issue 1. Six (6) core financial determinants of the financial derivatives' usage are confirmed of research issue 2 and six (6) non-core financial determinants of financial derivatives' usage are confirmed of research issue 3. In addition, two (2) core non-financial determinants of the financial derivatives' usage are confirmed of research issue 4 and ten (10) non-core, non-financial determinants of the financial derivatives' usage are confirmed of research issue 5. The detail of conclusions on all five research issues is in the following section.

5.2 Conclusion on the Research Problem

In the previous section, conclusions of all five research issues have been discussed. This section concludes the research problem of this research. From the above discussions, now, it is feasible to present the general research problem of this research: *How and why the determinants of the financial derivatives' usage could be established within SME businesses in Pakistan?*

5.2.1 Preliminary theoretical framework versus findings from this research

A preliminary theoretical framework of the determinants of the financial derivatives' usage within SME businesses in Pakistan was formulated based on the synthesisation of literature presented in section 2.4 and section 2.6 in chapter 2. A total of twenty (20) determinants of the financial derivatives' usage were included in the preliminary theoretical framework from all general businesses and SME businesses. These are then divided into four categories. However, these research findings produce another set of twenty four (24) determinants across all categories. These two (2) sets of the determinants of the financial derivatives' usage are put side by side to make the comparison easier between these two sets as shown in figure 5.2.

From the determinants of the financial derivatives' usage perspective, twenty (20) determinants were identified from the synthesisation of literature. Among these, nineteen

(19) determinants are confirmed by the interviewees from the SME businesses in Pakistan as shown in box 1, foci A, figure 5.2. On the other hand, there are five newly discovered determinants that emerged from this research (box 1, foci B, figure 5.2).

In terms of core financial determinants of the financial derivatives' usage, five (5) out of six (6) determinants of the financial derivatives' usage within SME businesses in Pakistan captured in the preliminary theoretical framework are confirmed by interviewees in this research as shown in box 2, foci A, figure 5.2. However, one determinant that was not confirmed by any of the interviewee in this research is underinvestment problem (box 2, foci A, figure 5.2). There is also one newly discovered determinant in this research which is Un-invested Cash (box 2, foci B, figure 5.2).

From the non-core financial determinants of the financial derivatives' usage perspective, five (5) non-core financial determinants of the usage of the financial derivatives within SME businesses in Pakistan, which captured in the preliminary theoretical framework are confirmed by interviewees in this research as shown in box 3, foci A, figure 5.2. Moreover, there is one newly discovered determinant in this research (box 3, foci B, figure 5.2.

In the perspective of core non-financial determinants, two (2) determinants of the financial derivatives' usage within SME businesses in Pakistan that were found in the preliminary theoretical framework of this research are also confirmed by interviewees in this research as shown in box 4, foci A, figure 5.2.

Lastly, from the non-core, non-financial determinants perceptive, seven (7) determinants of the financial derivatives' usage within SME businesses in Pakistan, captured in the preliminary theoretical framework of this research, are confirmed by interviewees in this research as shown in box 5, foci A, figure 5.2. In addition, there are three (3) newly discovered determinants that emerged in this research (box 5, foci B, figure 5.2.

In the conclusion, the comparison between the preliminary theoretical framework and the finding from this research reveals that only one (1) determinant out of the twenty (20) captured from the literature is not confirmed in this research. The remaining nineteen (19) determinants captured from the literature are confirmed in this research. In similar vein, five (5) newly discovered determinants have emerged in this research. Therefore, with the disconfirmation of one determinant and addition of five new determinants, a total of twenty four (24) determinants have been confirmed in this research.

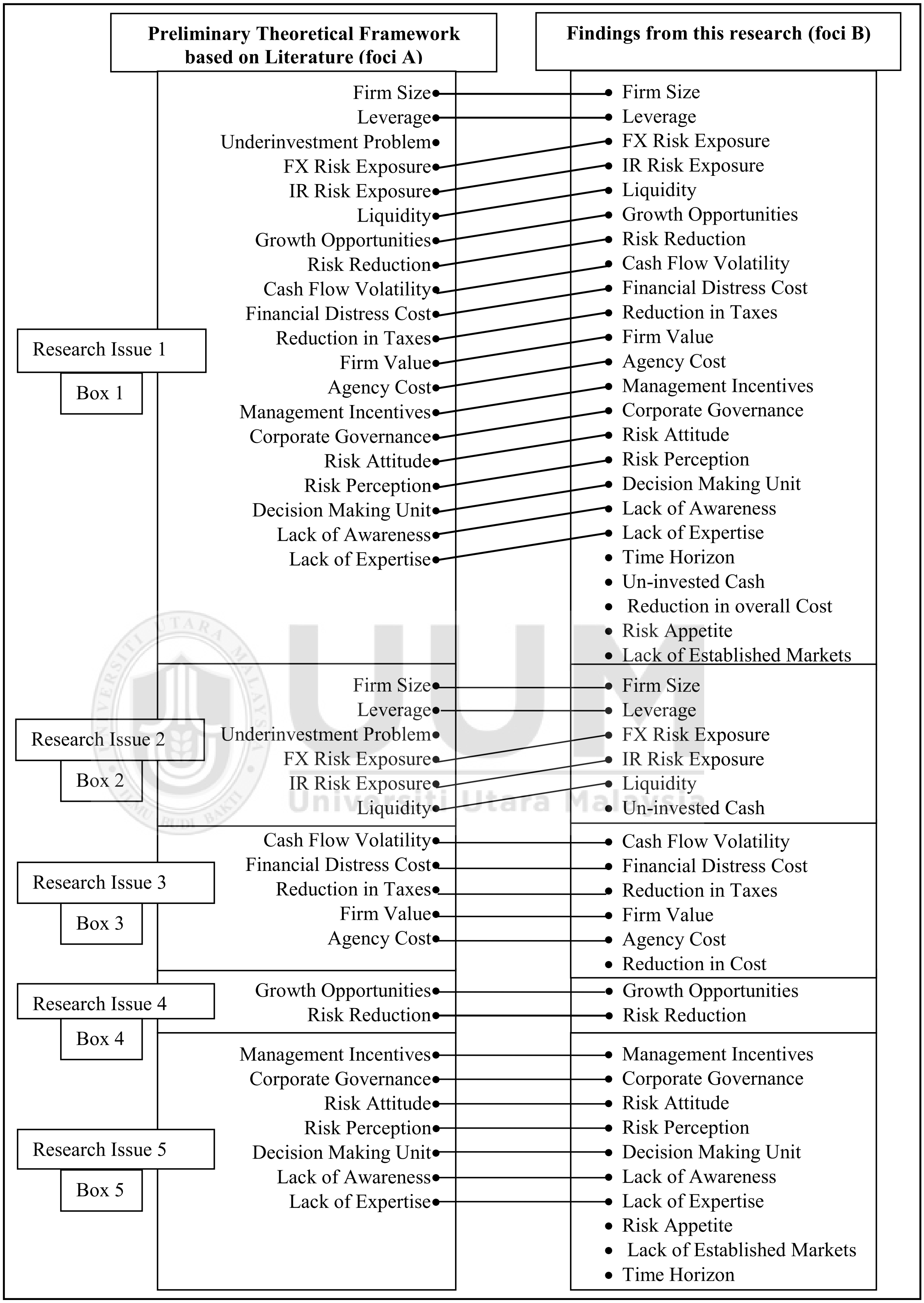


Figure 5.2

*Preliminary Theoretical Framework based on Literature VS. Findings from this Research*Source: developed for this research

5.2.2 Revised Theoretical Framework

The comparison between preliminary theoretical framework and the findings from this research is made in previous section. This section explains the minor alteration made to the preliminary theoretical framework. A revised theoretical framework of the determinants of the financial derivatives' usage within SME businesses in Pakistan replaces the preliminary one. This concluding theoretical framework is developed as a conclusion of the discussion of the five (5) research issues of this research and the confirmation of the determinants in the prior section.

The revised framework is sketched in figure 5.3. This revised framework works as the base of the discussion of the conclusion of the research problem statement as a whole: *How and why the determinants of the financial derivatives' usage could be established within SME businesses in Pakistan?*

Financial Determinants (Core)

1. Firm Size
2. Leverage
3. FX Risk Exposure
4. IR Risk Exposure
5. Liquidity
6. *Un-invested Cash*

Non-Financial Determinants (Core)

1. Growth Opportunities
2. Risk Reduction

The Determinants of the Usage of the Financial Derivatives within Pakistan SME Businesses

(Non-Core)

1. Cash Flow Volatility
2. Financial Distress Cost
3. Reduction in Taxes
4. Firm Value
5. Agency Cost
6. *Reduction in overall cost*

(Non-Core)

1. Management Incentives
2. Corporate Governance
3. Risk Attitude
4. Risk Perception
5. Decision Making Unit
6. Lack of Awareness
7. Lack of Expertise
8. *Risk appetite*
9. *Lack of established markets*
10. *Time Horizon*

Figure 5.3
Revised Theoretical Framework based on the Findings of this Research

5.3 Research Implications

In the preceding sections, the conclusions on the five research issues have been fully presented and this was followed by the conclusions on the research problem. Afterwards, the revised theoretical framework of determinants of financial derivatives' usage within SME businesses in Pakistan based on various amounts of explanations, was addressed. Current section discusses the implications of this research findings with respect to theory, methodology, practice and policy are offered in subsections (5.3.1, 5.3.2, 5.3.3) respectively.

5.3.1 Implications for theory

This research has two theoretical implications. First, this research generates a new knowledge that could be used for *theory building* with respect to the determinants of the financial derivatives' usage within SME businesses. These are the financial (core and non-core) determinants and non-financial (core and non-core) determinants. It really anticipates new ways in order to understand them. It also presents a comprehensive and an accurate lens through which future research on the financial derivatives' usage within SME businesses could be viewed. As a result, this research advances the theory of the financial derivatives' usage by formulating four categories of determinants of the financial derivatives' usage. These are core financial, non-core financial, core non-financial and non-core non-financial determinants. The confirmation of the twenty-four determinants also strengthened the framework as a viable one.

Second, this research is the first to present and to substantiate that time horizon, un-invested cash, overall cost reduction, risk appetite and lack of established market are the new emerging determinants of the financial derivatives' usage within SME businesses. It also provides a confirmation of these new determinants as core financial, non-core financial, core non-financial and non-core non-financial determinants of financial derivatives in SME businesses. It thus makes a considerable contribution to the existing body of knowledge on the determinants of the financial derivatives' usage within SME businesses.

5.3.2 Implications for methodology

This section addresses the methodology related implications. There are two implications for methodology. First, this research is a thorough and in-depth study in the paradigm of SME businesses in Pakistan that utilized “qualitative convergent interviewing” technique to examine the determinants of the financial derivatives’ usage within SME businesses. This research technique permits the experts of the research topic (CFOs) to share their experiences and articulate their opinions. Their experiences, insights and opinions have provided the answers to the five research issues and the research problem enunciated in this research. There is also refinement and confirmation of the preliminary theoretical framework formulated in chapter 2. This research clearly presents the significant evidence on the importance and potential of qualitative research methodology of convergent interviews.

Secondly, this is assumed to be the first research which utilized the method of combining two sampling techniques (snowball and purposive sampling techniques) on this topic. This sampling method does not only enable the inaccessible population to be reached but also enabled the opinions to be attained from the target population. This strengthens the data collection as it makes provision for diversity in the sampling technique. The next section discusses implications for practice in this research.

5.3.3 Implications for practice

This section discusses implications for practice of this research. The research practice implication targets the Chief Financial Officers (CFOs) in SMEs and experts of derivatives and international finance who are looking for ways to optimize financial derivatives’ usage within SMEs. The essence is to formulate concrete directions for effective implementation of focused financial derivative's usage strategies in SMEs. There are three implications for practice.

First, the results of this research suggest one way by which organizational leaders (specifically the top position holders) could obtain organizational accomplishment in SMEs. This would enable them in (i) assessing the financial derivatives demands in the perspective of organizational goals in order to decide the possible types of financial derivatives. This could be put into practice first by making clear that CFOs and general managers finance, are aware of the major principles of organizations, including firms' vision, goals and values for the achievement of the organization. (ii) It will also help them in harnessing resourceful factors like, risk determination, evaluation of financial statistics, usage of particular financial derivatives that could be used for the improvement of the firms' financial position. And each determinant contributes to the financial derivatives' usage, which in turn would improve performance of the SME businesses. This current framework encompasses the determinants that have been acknowledged by Chief Financial Officers of SME businesses.

Therefore, it presents clear and accurate directions on the financial derivatives' usage within SME businesses as the new best practice. Therefore, this research findings could be of possible aid to practitioners of SME businesses to bolster their firms' performance. This is because the usage of the financial derivatives' instruments could shore up the firm performance and assist in gaining competitive advantage over their competitors.

The second implication for practice concerns the usage of financial derivatives. These research findings are actually the voice of Chief Financial Officers from the perspective of financial derivatives' usage. After knowing, how CFOs think and what they consider before moving towards the usage of the financial derivatives, which enable them to formulate a more comprehensive strategy that address risk management concerns accurately, thus improving the firms performance. Besides, it would also become a guideline or reference to the firms, which would intend to enter into derivative market.

Hence, with the awareness augmented on derivatives' usage, firms may hedge their risk exposure by appropriate arrangements through the business operations and also know the main determinants that could affect the stipulation of derivatives' usage in Pakistan SME businesses environment. This chapter continues discussion on the policy implication in the following section.

5.3.4 Implications for policy

This section centres on the implications for policy makers. The first implication for policy makers relates to the financial derivatives' usage within SME businesses in line with the government vision 2025. This vision is meant to improve the performance of SME businesses and to boost the SME businesses contribution to the GDP in the country (Pakistan). Therefore, this research provides the direction that government could adopt in helping SME businesses in the country via grant or new initiatives that will motivate the usage of the financial derivatives. In addition, the findings of this research are useful to Small and Medium Sized Enterprises Authority (SMEDA); the institution that formulates policies for SME development in Pakistan.

Moreover, the findings of this research could be included in the government vision 2025 plan for SMEs growth in respect of capacity building of SME businesses particularly in the area of financial derivatives' usage. The objective of the vision is to promote the country's business organizations so as to become twenty fifth largest economy around the globe by 2025. Government can also help them by providing budget for the development of markets. The existence of capital market is very important as suggested by the respondents on the lack of established markets. Markets actually provide platforms on which the organizations could have easy access to foreign markets and thereby increasing exports through the established markets.

Besides SMEDA, there are two big regulatory bodies including SECP and SBP which are highly involved in the policy making of the country. This is based on the fact that SBP provides the definitions of SMEs and takes initiatives in the financial concerns of SME businesses in Pakistan. This research would therefore be helpful for the SBP to make regulations regarding the financial derivatives usage in SMEs. SBP formulates Financial Derivatives Business Regulations (FDBR) in Pakistan. The findings of this research could potentially helpful for SBP while focusing on the dealersdue diligence to ensure that their customers are allowed to enter into derivatives transactions against their underlying exposure. In addition, making regulations for market divisions especially, hedging and alternatives to amend the risk profile of customers of their underlying exposures. Moreover, findings could potentially helpful for SBP in formulating regulations where financial institutions should be more engaged with the customers like medium size firm while making derivatives' contracts.

The findings of this research could potentially helpful for SECP also giving equal opportunities to both the SMEs and the larger firms because SMEs provide a lot of employment, make contribution in GDP and add to foreign reserves through their exports. By this reason, SMEs need huge financial capacity while dealing with their foreign counterparts in order to run their business contracts smoothly. As emerged in the findings of this research lack of established market is the major determinants for SMEs while making decision to use financial derivatives. Therefore, SECP should make legislation for the establishment of new trading platforms to give opportunity to SMEs to use financial derivatives. Thus, these research findings could assist in the implementations of more polished programs, especially those that are related to financial derivatives' usage strategies.

Furthermore, Pakistan Trade Association (PTA), as one of the highest bodies that plays important role in the trade development within and outside the country, can help SME businesses involved in exports to use financial derivatives on the issues of foreign exchange rate, interest rate and commodities prices. They can help SMEs by making regulations that will allow them to use financial contracts with their counterparties as easy as possible. They can easily move towards the usage of the financial derivatives to make arrangements in respect of different types of risks with the objective of improving performance among the SME businesses in Pakistan. Therefore, findings of this research could potentially helpful for PTA to give maximum access to the SMEs in foreign agreements. PTA could establish quota system for SMEs in their overall exports and could support SMEs by providing letter of confidence and trust to counter parties on behalf of SMEs engaging in financial derivatives activities.

In winding up, this research findings could be constructive to be integrated in the strategies for SMEs; the SME vision and to diverse schemes, existing for SMEs to augment their competitiveness and performance by supporting the policy-makers to devise the non-governmental and governmental sound supportive schemes and strategies related to increase the usage of the financial derivatives.

5.4 Limitations of this Research

The previous section discussedthe implications of this research. In this sense, this section highlights the limitations of this research. Evidently, this research provided several new insights into the implications of financial derivatives' usage within Pakistan SME businesses. Nevertheless, these should be viewed with some limitations. In the section 1.6 of chapter 1, three delimitations of the research scope were explained. In the section 3.3.2 of chapter 3, five limitations of convergent interviewing technique were discussed. In addition, in section 4.1.1 of chapter 4, certain limitations associated to the data collection process were highlighted mainly due to the time involved in scheduling an interview.

Nonetheless, these limitations should not be viewed as weaknesses as they were minimized by careful preparation and planning of the data collection and the interview process. In addition, the uniqueness of this study paired with its limitations, constituted that any results that were drawn would be confined to SME businesses only. In summary, despite of the emerged limitations, the main strengths of this research remained, for the limitations had not detracted from them because this research yield a valuable contributions to the financial derivatives' usage methodology, theory, practice andpolicy.

5.5 Recommendations for Future Research

The previous section explained the limitations of this research. In turn, this section continues to highlight the avenues for possible future research. This research took a strong first step to explore the determinants of the financial derivatives' usage within SME businesses in Pakistna, including the financial (core and non-core)determinants and the non-financial (core and non-core)determinants. Although the findings of this research answered some questions, these also led to the possibility of further research in the future. There are four possible directions for futureresearch.

Firstly, this research could be the foundation to build other determinants of the financial derivatives' usage. Hence, any future research should explore other relevant determinants. The future investigation on other determinants of the usage of the financial derivatives could shed more light on the financial derivatives' usage especially in the context of SME business including the financial (core and non-core) determinants and the non-financial (core and non-core) determinants.

Secondly, further research is required to validate and to generalize the findings to a broader settings. Therefore, similar research issues should be explored in different service sectors. Moreovere this research could also be replicated in other developing countries such as India, Bangladesh, China, Sri Lanka, Malaysia, Indonesia and Thailand to confirm determinants found in this research are similar or generic in SME businesses in other developing countries, which encompass different economic or financial culture and regulatory context.

Thirdly, this research used qualitative research approach by utilizing convergent interviewing technique to develop the framework of the determinants of the financial derivatives' usage within SME businesses in Pakistan. Future research could utilize quantitative approach to test this framework.

Fourthly, future research could investigate any similarities or differences in the determinants of the financial derivatives' usage at the SME businesses level to further enhance an understanding on the core and the non-core determinants of the financial derivatives' usage within the Pakistan SME businesses.

In summary, there are four possible directions for further research. First, the future research are required to build other determinants of the usage of the financial derivatives in the context of SME business. Next, they could be conducted to validate and to generalize the findings to a broader setting. Third, this research used qualitative research approach by utilizing convergent interviewing technique to develop the framework and finally, future research could investigate any similarities or differences in the determinants of the financial derivatives' usage at the SME businesses level to further enhance an understanding on the core and the non-core determinants.

5.6 Conclusion

In this chapter, the discussion and comparison of the literature with the findings of the five research issues were presented: (i) to confirm and disconfirm the preliminary theoretical framework of the research; and (ii) to identify the contribution of this research in order to deepen the understanding of the research problem. Subsequently, conclusions on the research problem have presented to address the preliminary theoretical framework that has been used in this research. Furthermore, several possible implications for methodology, theory, practice and policy are offered. These are followed by the limitations of the present research. Finally, the directions for future research have been recommended.

In summary, this research has provided a structure for the understanding of the determinants regarding financial derivatives' usage within SME businesses in Pakistan. Indeed, this research has also explored the core financial determinants and the non-core financial determinants and core non-financial determinants and non-core non-financial determinants. The literature suggests that the determinants of the financial derivatives' usage including the financial (core and non-core) determinants and the non-financial (core and non-core) determinants in general business setting are similar to the determinants for the financial derivatives' usage within SME businesses. This theory building research shows that the nineteen (19) determinants of the financial derivatives' usage in both all general businesses and SME businesses mentioned in the literature are consistent with the findings of this research.

Nevertheless, five newly emerging determinants have been unveiled in this research. The revised conceptual framework that is built from theory and empirical research to represent this process have provided a foundation for future research on the determinants of the financial derivatives' usage as well as on the financial (core and non-core) determinants and non-financial (core and non-core)determinants. These could add value to the research on the finance departments, investment departments, financial practitioners and other stakeholders with various interests towards the organizations' financial issues.

In overall conclusion, this research successfully addresses the research issues and provides a framework of the determinants on the financial derivatives' usage within SME businesses in Pakistan from the five (5) perspectives. In addition, this research also contributes to the body of knowledge within SME businesses in Pakistan. Lastly, the main objective of this research has been met.

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APPENDICES

Appendix 1: Interview Invitation Letter

Muhammad Nawaz
(Matric No: 901687)
School of Economics, Finance and Banking (SEFB)
University Utara Malaysia (UUM)
06010 Sintok, Kedah
Tel: +923335931389
Email: nawaz120vbs@hgmail.com

<Interviewee Name>
<Address>

Date:

Dear Sir/Madam,

Research Project Title: The determinants of the financial derivatives' usage within SME businesses in Pakistan: An Exploratory Qualitative Inquiry

I am undertaking a research project in partial fulfilment of the requirements for the Doctor of Philosophy (PhD) in Finance in the School of Economics, Finance and Banking (SEFB) Graduate School of Business at UUM under the supervision of Professor Dr. Mohd Amy Azhar Haji Mohd Harif.

I am conducting interviews to investigate the determinants of financial derivatives' usage within SME businesses in Pakistan. This research aims to better understand the top management experiences and perceptions in relation to the financial derivatives' usage within SME businesses. Therefore, I would like to invite the top managers of SMEs in Pakistan preferable the Chief Financial Officer (CFO) to participate in this research. Participation in this research is entirely voluntary. The participant may withdraw from this research project at any time without giving a reason. He/she also has the option to withdraw any input that may identify him/her.

The interview consists of a set of questions, which will take approximately 30 minutes. The participant will be required to answer questions in regards to his/her experiences in his/her job on financial derivatives' usage practices and outcomes in the company. The participant will also be asked for some demographic information.

The participant input consists of vital information regarding the participant experiences on the determinants of the financial derivatives' usage in his/her company. The participant's permission will be asked to tape record the interview session, to enable me to accurately document the information the participant convey. If at any time during the interview, the participant wishes to discontinue the use of the recorder or the interview itself, he/she is free to do so.

All data collected in the interview is confidential and anonymous. For the secrecy of the company and the participant, the company and the participant name will be disguised in the final research report along with any other significant details, in order to achieve anonymity.

At the conclusion of this research project, the final results of the interview will be reported in a dissertation to be submitted for Mr. Muhammad Nawaz's PhD degree and as appropriate, in papers for presentation at conferences or for publication in scientific journals.

Should you require any clarification and/or additional information, please do not hesitate to inform me at **nawaz120vbs@gmail.com** or by calling or *Whatsapp* me at **+923335931389**.

To participate in this research project, kindly contact the researcher at the above mentioned contact information. The date, time and venue of the interview will be set according to the participant preference. The consent form will be signed by the participant before the interview session.

I would like to thank you in advance for your consideration to participate in this research project.

Thank you.

Yours sincerely,

Muhammad Nawaz
901687
PhD

Appendix 2: Interview Protocol Set 1 of Convergent Interview

Muhammad Nawaz
Doctor of Philosophy (PhD)
University Utara Malaysia
Tel:+923335931389
nawaz120vbs@gmail.com

The Determinants of the Financial Derivatives' Usage within SME Businesses in Pakistan

Interview Protocol of Convergent Interviews

Date :……./……../……… Time :……..am/pm

Company :…………………………………………………………

Interviewee :………………………………………………………...

Position :…………………………………………………………

Introduction

Dear Participant,

Thank you for taking the time to participate in this research project. This interview will take approximately 30 minutes. You will be required to answer questions in regards to your experiences in your job and the financial derivative practice in your company.

Purpose of the Research Project

This research project investigates the determinants of the financial derivatives' usage within SME businesses in Pakistan. This research aims to better understand the top manager's experiences and perceptions in relations to financial derivatives' usage within SME businesses.

Ethical Concerns

All data collected in this interview is confidential and anonymous. For the safety benefits of your company and yourself, the company and your name will be disguised in the final research report along with any other significant details, in order to achieve anonymity.

Your permission to tape record this interview is required. The recorded interview will assist me with my data analysis. Please note that you are free to push “pause” button of the tape recorder at any time during the interview and you can terminate the interview at any time that you wish.

Do you have further question regarding the aim or procedure of this interview?

Benefits Associated with Participation

There are no direct benefits for participating in this research project but your input will provide vital information regarding the specific outcomes of the determinants of the financial derivatives’ usage within SME businesses in Pakistan.

The final results of the interview will be reported in a dissertation to be submitted for Mr. Muhammad Nawaz’s PhD degree and as appropriate, in papers for presentation at conferences or for publication in scientific journals.

Your cooperation and generosity in participating in this study is highly valued and appreciated.

Thank you,

Muhammad Nawaz
901687
PhD

Interview Questions

1. May you share your experience in financial derivatives during your career?

2. How and what the financial derivatives activities of your company is participating?

3. In your opinion, what are the determinants of the usage of the financial derivatives?

4. Based on your previous answer what are the core financial determinants of the usage of the financial derivatives?

5. What are the non-core financial determinants to use financial derivatives?

6. What are the core non-financial determinants to use financial derivatives?

7. What are the non-core, non-financial determinants to use financial derivatives?

8. Can you suggest me other questions should I have asked you in regards to this research topic?

9. Would you please provide me few referrals in SMEs business that in your opinion that person can contribute to this research and I should talk to?

In closing, I would like to thank you for spending your valuable time and taking part in this research. Appreciate that very much.

May I ask your permission to return later in the process if I have any points need to clarify with you?

Thank You.

Appendix 3: Interview Protocol Modified Set 2 of Convergent Interview

Muhammad Nawaz
Doctor of Philosophy (PhD)
University Utara Malaysia
Tel:+923335931389
nawaz120vbs@gmail.com

Interview Protocol of Convergent Interviews

Date :……./……../……… Time :……..am/pm

Company :…………………………………………………….

Interviewee :…………………………………………………...

Position :…………………………………………………….

Introduction

Dear Participant,

Thank you for taking the time to participate in this research project. This interview will take approximately 30 minutes. You will be required to answer questions in regards to your experiences in your job and the financial derivative practice in your company.

Purpose of the Research Project

This research project investigates the determinants of the financial derivatives' usage within SME businesses in Pakistan. This research aims to better understand the top manager's experiences and perceptions in relations to financial derivatives' usage within SME businesses.

Ethical Concerns

All data collected in this interview is confidential and anonymous. For the safety benefits of your company and yourself, the company and your name will be disguised in the final research report along with any other significant details, in order to achieve anonymity.

Your permission to tape record this interview is required. The recorded interview will assist me with my data analysis. Please note that you are free to push "pause" button of the tape recorder at any time during the interview and you can terminate the interview at any time that you wish.

Do you have further question regarding the aim or procedure of this interview?

Benefits Associated with Participation

There are no direct benefits for participating in this research project but your input will provide vital information regarding the specific outcomes of the determinants of the financial derivatives' usage within SME businesses in Pakistan.

The final results of the interview will be reported in a dissertation to be submitted for Mr. Muhammad Nawaz's PhD degree and as appropriate, in papers for presentation at conferences or for publication in scientific journals.

Your cooperation and generosity in participating in this study is highly valued and appreciated.

Thank you,

Muhammad Nawaz
901687
PhD

Interview Questions

1. May you share your experience in financial derivatives during your career?

2. How and what the financial derivatives activities of your company is participating?

3. In your opinion, what are the determinants of the usage of the financial derivatives?

4. Do you think time horizon and un-invested cash influence your decision to use financial derivatives?

5. Based on your previous two answers, what are the core financial determinants of the usage of the financial derivatives?

6. In your answer what do you think, underinvestment problem could be considered as core financial determinant of the financial derivatives' usage?

7. What are the non-core financial determinants to use financial derivatives?

8. Do you think financial distress cost could be considered as the non-core financial determinants of the financial derivatives in your organization?

9. What are the core non-financial determinants to use financial derivatives?

10. What are the non-core, non-financial determinants to use financial derivatives?

11. Can you suggest me other questions should I have asked you in regards to this research topic?

12. Would you please provide me few referrals in SMEs business that in your opinion that person can contribute to this research and I should talk to?

In closing, I would like to thank you for spending your valuable time and taking part in this research. Appreciate that very much.

May I ask your permission to return later in the process if I have any points need to clarify with you?

Thank You.

Appendix 4: Interview Protocol Modified Set 3 of Convergent Interview

Muhammad Nawaz
Doctor of Philosophy (PhD)
University Utara Malaysia
Tel:+923335931389
nawaz120vbs@gmail.com

Interview Protocol of Convergent Interviews

Date :……./……../……… Time :……..am/pm

Company :……………………………………………………….

Interviewee :……………………………………………………...

Position :……………………………………………………….

Introduction

Dear Participant,

Thank you for taking the time to participate in this research project. This interview will take approximately 30 minutes. You will be required to answer questions in regards to your experiences in your job and the financial derivative practice in your company.

Purpose of the Research Project

This research project investigates the determinants of the financial derivatives' usage within SME businesses in Malaysia. This research aims to better understand the top manager's experiences and perceptions in relations to financial derivatives' usage within SME businesses.

Ethical Concerns

All data collected in this interview is confidential and anonymous. For the safety benefits of your company and yourself, the company and your name will be disguised in the final research report along with any other significant details, in order to achieve anonymity.

Your permission to tape record this interview is required. The recorded interview will assist me with my data analysis. Please note that you are free to push "pause" button of the tape recorder at any time during the interview and you can terminate the interview at any time that you wish.

Do you have further question regarding the aim or procedure of this interview?

Benefits Associated with Participation

There are no direct benefits for participating in this research project but your input will provide vital information regarding the specific outcomes of the determinants of the financial derivatives' usage within SME businesses in Pakistan.

The final results of the interview will be reported in a dissertation to be submitted for Mr. Muhammad Nawaz's PhD degree and as appropriate, in papers for presentation at conferences or for publication in scientific journals.

Your cooperation and generosity in participating in this study is highly valued and appreciated.

Thank you,

Muhammad Nawaz
901687
PhD

Interview Questions

1. May you share your experience in financial derivatives during your career?

2. How and what the financial derivatives activities of your company is participating?

3. In your opinion, what are the determinants of the usage of the financial derivatives?

4. Do you think time horizon and un-invested cash influence your decision to use financial derivatives?

5. Do you agree that the following determinants are not the determinants of the financial derivatives' usage in your organization and why?
   a. Underinvestment Problem
   b. Growth Opportunities
   c. Management Incentives
   d. Agency Cost

6. Based on your previous answers, what are the core financial determinants of the usage of the financial derivatives?

7. In your answer, what do you think, underinvestment problem could be considered as core financial determinant of the financial derivatives' usage?

8. What are the non-core financial determinants to use financial derivatives?

9. What do you think overall reduction in cost can influence your decision to use financial derivatives?

10. What are the core non-financial determinants to use financial derivatives?

11. What are the non-core, non-financial determinants to use financial derivatives?

12. Did you consider risk appetite of the firm and lack of established markets before going to make decision to use financial derivatives in your organization?

13. Can you suggest me other questions should I have asked you in regards to this research topic?

14. Would you please provide me few referrals in SMEs business that in your opinion that person can contribute to this research and I should talk to?

In closing, I would like to thank you for spending your valuable time and taking part in this research. Appreciate that very much.

May I ask your permission to return later in the process if I have any points need to clarify with you?

Thank You.

Appendix 5: Consent to Participate in a Research Project Form

Consent to Participate in a Research Project
University Utara Malaysia

Title of the Research: **The determinants of the financial derivatives' usage within SME businesses in Pakistan**

Investigator:
Name: Muhammad Nawaz
School: School of Economics, Finance and Banking (SEFB)
Tel: +923335931389
Email: nawaz120vbs@gmail.com

Supervisor:
Name: Professor Dr. Mohd Amy Azhar Haji Mohd Harif
School: School of Economics, Finance and Banking (SEFB)
Tel: 019 555 9939
Email: amyazhar@uum.edu.my

Dear Participant,

Thank you for taking the time to participate in this research project. This interview will take approximately 30 minutes. You will be required to answer questions in regards to your experiences in your job and the financial derivatives' usage practice in your company.

Purpose of the Research Project

This research project investigates the determinants of the financial derivatives' usage within SME businesses in Pakistan. This research aims to better understand the top manager's experiences and perceptions in relations to the determinants of the financial derivatives' usage.

Ethical Concerns

All data collected in this interview is confidential and anonymous. For the safety benefits of your company and yourself, the company and your name will be disguised in the final research report along with any other significant details, in order to achieve anonymity.

Your permission to tape record this interview is required. The recorded interview will assist me with my data analysis. Please note that you are free to push "pause" button of the tape recorder at any time during the interview and you can terminate the interview at any time that you wish.

Benefits Associated with Participation

There is no direct benefit for participating in this research project but your input will provide vital information regarding the determinants of the financial derivatives' usage within SME businesses in Pakistan.

The final results of the interview will be reported in a dissertation to be submitted for Mr. Muhammad Nawaz's PhD degree and as appropriate, in papers for presentation at conferences or for publication in scientific journals.

Voluntary Consent by Participant

By signing below, you indicate that:

- This study has been explained to you;
- You have read this document or it has been read to you;
- Your questions about this research project have been answered;
- You are entitled to a copy of this form after you have read and signed it;
- You voluntarily agree to participate in the research entitled: *The determinants of the financial derivatives' usage within SME businesses in Pakistan*

Participant's Name:____

Position:____

Participant's Signature: ______________________________________

Date:______________________________

Time:______________________________

Appendix 6: Seven Steps to Facilitate Effective Communication

Step 1 Contacting the respondents	▪ The potential respondents will be contacted. ▪ An overview of the research will be explained, purpose of the interview will be clarified. ▪ If agreed to participate, the venue and time will be decided (Carson et al, 2001).
Step 2 Time and setting	▪ The length of the interview session will be informed. ▪ Face-to-face interviews will be carried out. ▪ Confirmation of the interview time will be confirmed the day prior to the scheduled interview.
Step 3 Establishing rapport and neutrality	▪ Clarification of the preliminary issues will be made at the start of the interview session (Carson et al, 2001). ▪ A briefs explanation on the aim of the research will be given after the researcher introducing herself. ▪ Confidentiality and anonymity of the interviews will be informed. ▪ Permission to tape record the interview will be sought.
Step 4 Opening question	▪ To start the interview with opening question (Nair &Reige, 1995).
Step 5 Probe questions	▪ Probe questions will be prepared based on the input from the first interview for the subsequent interview based on the proceeding interview.
Step 6 Inviting a summary	The researcher starts closure by: ▪ inviting the interviewee to highlight the key points; ▪ indicating their relative priority and then questions to indicate priority (Dick, 1990),
Step 7 Concluding the interview	▪ The interviewer will summarize the interview. ▪ End the session ends by thanking the interviewee for the cooperation given and offering a copy of the data analysis. ▪ Reassure the interviewee of the confidentiality and anonymity of the interview.

Source: adaptation from Dick (1990) and developed for this research

Appendix 7: Results of Thematic Analysis of Research Issue 1

Liquidity (DFD13) | Foreign Exchange Risk Exposure (DFD10) | Firm Size (DFD1) | Leverage (DFD2) | Exposure in Foreign Currency (DFD10) | Leverage of the firm (DFD2) |Size of the Firm (DFD1) | Cash Flow position of the firm (DFD3) | Liquidity Position (DFD13) | Leverage of the firm (DFD2) | Foreign Exchange Rate (DFD10) | Size of the firm (DFD1) | Foreign Exchange Risk level (DFD10) | Liquidity Risk (DFD13) | Cash flow (DFD3) | Size of my firm (DFD1) | Firm Corporate Governance (DFD15) | Awareness to hedge risk (DFD19) | Lack of Expertise (DFD20) | Firm Size (DFD1) | Corporate Governance Regulations (DFD15) | Foreign Exchange Transactions (DFD10) | Liquidity (DFD13) | Operating Cash flows of the firm (DFD3) | Firm Size (DFD1) | Foreign Transactions volume (DFD10) | Liquidity of the firm (DFD13) | Currency Exchange Rate (DFD10) | Awareness about hedging and swaps (DFD19) | To reduce the risk (DFD9) | Management Attitude (DFD16) | And their perception (DFD17) | Interest rate risk involved in transactions (DFD12) | Regulations of state institutions (DFD15) | Management Experience (DFD20) | Firm Size (DFD1) | Interest Rate fluctuations (DFD12) | Cash flow fluctuations (DFD3) | Risk exposure regarding foreign currency (DFD10) | Tax volume reduction (DFD8) | Cost of Intermediaries (DFD14) | Used to face firms' risk (DFD9) | Capabilities to foresee the essence (DFD20) | Interest rate exposure (DFD12) | mitigating this risk (DFD9) | Cash flow fluctuations (DFD3) | So we have to has ample liquid assets (DFD13) | Foreign exchange or currency differences (DFD10) | Reduce our level of taxes (DFD8) | Awareness (DFD19) | Liquidity prepositions (DFD13) | Cash flows of coming years or our cash flow analysis (DFD3) | Leverage (DFD2) | Firm size (DFD1) | Currency fluctuations (DFD10) | Capabilities to perform (DFD20) | Size of the firm (DFD1) | FX risk exposure generated from currency fluctuations (DFD10) | Consideration of tax management (DFD8) | The perception of risk (DFD17) | Growth prepositions (DFD6) | Corporate governance matter (DFD15) | Managers' expertise (DFD20) | Attitude to minimize the risk (DFD16) | Awareness (DFD19) | Financial distress cost (DFD7) | Liquidity an import aspect (DFD13) | Risk we have to mitigate (DFD9) | Currency fluctuations (DFD10) | Firm size (DFD1) | Exchange rate fluctuations (DFD10) | Management Perception (DFD17) | Unbearable currency fluctuations (DFD10) | Our cash flow volatility (DFD3) | Risk reduction policies of our firm (DFD9) | Our firm size (DFD1) | Risk covering is the main reason (DFD9) | If Interest rate expenses goes up (DFD12) | Risk due to currency fluctuations (DFD10) | Firm size (DFD1) | Firm growth potentials (DFD6) | Management Incentives (DFD5) | Attitude toward risk by owners (DFD16) | Well aware of derivatives (DFD19) | Foreign Exchange exposure (DFD10) | Adverse liquidity position (DFD13) | how much incentives I have (DFD5) | Risk reduction (DFD9) | Interest rate exposure (DFD12) | how much confidence I have (DFD20) To lock the risk (DFD9) |Don't have knowledge (DFD19) | Agency fee or cost (DFD14) | Volume of currency you are dealing (DFD10) | Management attitude (DFD16) | Depends upon the size of the firm (DFD1) | To finance interest receipts (DFD12) | Mostly firm size affects (DFD1) | Foreign exchange fluctuations (DFD10) | Risk of Interest rate exposure (DFD12) | Liquidity Issue (DFD13) | Potential projects (DFD6) | To settle the cash flow (DFD3) | Liquidity crisis (DFD13) | To avoid the risk (DFD9) | Foreign exchange exposure (DFD10) | Interest Rate exposure (DFD12) | Knowledge of derivatives (DFD19) | Leverage (DFD2) | Mitigate the chances of uncertain situations risk (DFD9) | Fluctuations in cash flows of the firm (DFD3) | Increasing opportunities of growth (DFD6) | Considering the firm size (DFD1) | Fluctuations in the foreign exchange rate (DFD10) | Liquidity issue (DFD13) | Attitude of management (DFD16) |

(DFD1) Firm Size	(DFD2) Leverage	(DFD3) Cash flow Volatility
(DFD4) Underinvestment	(DFD5) Management	(DFD6) Growth
(DFD7) Financial Distress	(DFD8) Reduction in Taxes	(DFD9) Risk Reduction
(DFD10) Reduce Exchange Rate Exposure	(DFD11) Firm Value	
(DFD12) Reduce Interest Rate Exposure	(DFD13) Liquidity	
(DFD14) Agency Cost Corporate Governance	(DFD15) High Corporate Governance	
(DFD16) Risk Attitude	(DFD17) Risk Perception	(DFD18) Decision Making
(DFD20) Lack of Expertise	(DFD19) Lack of Awareness	

Appendix 8: Results of Thematic Analysis of Research Issue 2

Size of the firm (CFD1) | Liquidity as I mentioned earlier (CFD6) | Leverage (CFD2) | Foreign Exchange Exposure regarding risk (CFD4) | Foreign Exchange exposure (CFD4) | Liquidity of the firm (CFD6) | Leverage level (CFD2) | Foreign Exchange rate (CFD4) | Liquidity (CFD6) | Leverage (CFD2) | Firm size (CFD1) | Liquidity Risk (CFD6) | Leverage (CFD2) | Foreign exchange risk (CFD4) | Interest Rate (CFD5) | Leverage (CFD2) | Foreign exchange transactions (CFD4) |Firm size (CFD1) | Foreign exchange exposure (CFD4) | Liquidity (CFD6) | Foreign currency risks (CFD4) | Interest rate risks (CFD5) | Firm size (CFD1) | Leverage (CFD2) | Leverage (CFD2) | Interest rate fluctuations (CFD5) | Liquidity (CFD6) | Foreign exchange risk exposure (CFD4) | Interest rate risk (CFD5) | Foreign exchange risk (CFD4) | Liquidity (CFD 6) |Liquidity parameters (CFD6) | Foreign exchange risk exposure (CFD4) | Firm size (CFD1) | Liquidity (CFD6) | Interest rate exposure (CFD5) | Leverage (CFD2) | Liquidity risk (CFD6) | Foreign exchange risk (CFD4) | Foreign exchange risk (CFD4) | Interest rate risk (CFD5) | Foreign currency fluctuations (CFD4) | Liquidity (CFD6) | Foreign exchange exposure (CFD4) | Liquidity position of the firm (CFD6) | Leverage exposure (CFD2) | Foreign exchange transactions (CFD4) | Firm size (CFD1) | Interest rate risk exposure (CFD5) | Foreign exchange exposure (CFD4) | Liquidity (CFD6) |Risk exposure (CFD5) | Firm size (CFD1) | Liquidity risk (CFD6) | Foreign risk exposure (CFD4) | Liquidity (CFD6) | Fluctuations in foreign exchange (CFD4) | Interest rate Fluctuations (CFD5) |

(CFD1) Firm size

(CFD2) Leverage

(CFD3) Underinvestment problem

(CFD4) Foreign exchange exposure

(CFD5) Interest Rate exposure

(CFD6) Liquidity

Appendix 9: Results of Thematic Analysis of Research Issue 3

Taxes matter a lot (NCFD3) | Different costs of transactions (NCFD5) | Fluctuations in cash flow (NCFD1) | Capacity of the firm/firm value (NCFD4) | Taxes matter (NCFD 3) | Fluctuations in cash flow (NCFD1) | Cost of using financial derivatives (NCFD5) | Cash flow (NCFD1) | Taxation rules or policies (NCFD3) | Cost of transactions for FDs (NCFD5) | Cost involved in using FDs (NCFD5) | Fluctuations in our cash flows (NCFD1) | Overall value of the firm (NCFD4) | Cash flow fluctuations (NCFD1) Tax benefits (NCFD3) | Third party services cost (NCFD5) | Cash flow fluctuations (NCFD1) | Firm value (NCFD4) | Taxes reduction (NCFD3) | Cash flow situation (NCFD1) | Taxes have vital key role (NCFD3) | Cash flow volatility (NCFD1) | Firm value (NCFD4) | Tax considerations (NCFD3) | Agency cost (NCFD5) | Cash flow fluctuations (NCFD1) | Reduction in cost based on decisions (NCFD5) | Reduce taxation cost (NCFD3) | Volatility of cash flows (NCFD1) | Firm value (NCFD4) | Cost of using financial derivatives (NCFD5) | Firms see their cash flows (NCFD1) | Financial distress cost (NCFD2) | See impact on taxes (NCFD3) | Agency cost (NCFD5) | Agency cost (NCFD5) | Fluctuation in cash flow (NCFD1) | Firm value (NCFD4) | Cash flow volatility (NCFD1) | Taxes matter which affect profitability (NCFD3) | Agency cost (NCFD5) | Agency cost (NCFD5) | Cash flow volatility (NCFD1) | Firm value (NCFD4) | Reducing taxes (NCFD3) |

(NCFD1) Cash flow volatility

(NCFD2) Financial distress cost

(NCFD3) Reduction in taxes

(NCFD4) Firm value

(NCFD5) Agency cost

Appendix 10: Results of Thematic Analysis of Research Issue 4

Level of risk involved (CNFD2) | Potential investment (CNFD1) | To reduce the risk (CNFD2) | Growth opportunities (CNFD1) | Growth determination (CNFD1) | Hedge against the risk (CNFD2) | Emerging projects (NCFD1) | Growth of the firm matter (CNFD1) | Risk reduction is the main purpose (CNFD2) | Reduce risk exposure (CNFD2) | Risk mitigation (CNFD2) | Major opportunities (CNFD1) | Growth opportunities (CNFD1) | To reduce the risk (CNFD2) | Risk reduction (CNFD2) | Firm growth opportunities (CNFD1) | Risk Reduction (CNFD2) | Growth opportunities to avail different contracts (CNFD1) | To reduce risk (CNFD2) | Growth opportunities (CNFD1) | How much risk it will reduce (CNFD2) | Potential to grow (CNFD1) | To reduce the firm risk (CNFD2) | See the growth perspectives (CNFD1) | Future opportunities or firm potential growth (CNFD1) | Purpose is to reduce the risk (CNFD2) |

(CNFD1) Growth Opportunities	(CNFD2) Risk Reduction

Appendix 11: Results of Thematic Analysis of Research Issue 5

Unavailability of regulations regarding FDs (NCNFD2) | Risk Attitude (NCNFD3) | Lack of Expertise (NCNFD7) | Awareness about the usage of FDs (NCNFD6) |Perception about the risk matters (NCNFD4) | Policies, governance and SOPs (NCNFD2) | Expertise matter (NCNFD7) | Management awareness (NCNFD6) | Their attitude toward risk (NCNFD3) | Expertise of management (NCNFD7) | Firm corporate governance (NCNFD2) | Availability of intermediaries (NCNFD5) | Lack of awareness (NCNFD6) | Non-expertise of management (NCNFD7) | Management perception influence them (NCNFD4) | Management risk attitude (NCNFD3) | Awareness (NCNFD6) | Expertise (NCNFD7) | Regulations and policies (NCNFD2) | Lack of awareness (NCNFD6) | Management experience (NCNFD7) | Management risk attitude (NCNFD3) | Perception also matter (NCNFD4) | Management benefits (NCNFD1) | Their attitude toward risk (NCNFD3) | Awareness is the major factor (NCNFD6) | No expertise (NCNFD7) | Awareness about derivatives (NCNFD6) | Personal expertise (NCNFD7) | Their awareness (NCNFD6) | Attitude (NCNFD3) | Perception (NCNFD4) | Corporate governance (NCNFD2) | Management attitude toward risk (NCNFD3) | Availability of experts (NCNFD7) | Management incentives (NCNFD1) | Decision making units (NCNFD5) | Corporate regulation (NCNFD2) |Overall attitude toward risk (NCNFD3) | Corporate governance (NCNFD2) | Attitude to accept risk (NCNFD3) | Management perception (NCNFD4) | Awareness about the usage (NCNFD6) | Regulations about FDs (NCNFD2) | Owners' awareness (NCNFD6) | Depend upon their attitude (NCNFD3) | Depend upon their knowledge (NCNFD7) | Perception matter very much (NCNFD4) | Awareness (NCNFD6) | Awareness would be at top (NCNFD6) | Quantity of expert people (NCNFD7) | Attitude (NCNFD3) | Awareness (NCNFD6) | Expertise (NCNFD7) | Availability of regulations to use FDs (NCNFD2) | Awareness matter a lot (NCNFD6) | No expertise the management have (NCNFD7) | Non availability of regulations (NCNFD2) | Perception about the risk matters a lot (NCNFD4) | Awareness is important factor (NCNFD6) | Lack of expertise (NCNFD7) |Management perception toward risk (NCNFD4) | Risk attitude (NCNFD3) |

(NCNFD1) Management incentives

(NCNFD2) Corporate governance

(NCNFD4) Risk perception

(NCNFD3) Risk attitude

(NCNFD5) Decision making unit

(NCNFD6) Lack of awareness

(NCNFD7) Lack of Expertise

Appendix 12: Analysis of Articles on Financial derivatives

		Articles' Background			
		1	2	3	4
Sr. No.	**Author(s)**	**Year of Publication 2000-Onward**	**Refereed Journal**	**Fit to the Definition of Financial Derivatives**	**Academic Literature**
1	Allayannis and Weston	2001	√	√	√
2	Hentschel and Kothari	2001	√	√	√
3	Adam	2002	√	√	√
4	Adedeji and Baker	2002	√	√	√
5	Berkman et al.	2002	√	√	√
6	Dadalt et al.	2002	√	√	√
7	Glaum	2002	√	√	√
8	Nguyen and Faff	2002	√	√	√
9	Pincus and Rajgopal	2002	√	√	√
10	Hagelin	2003	√	√	√
11	Shu and Chen	2003	√	√	√
12	Goswami et al.	2004	√	√	√
13	Brailsford et al.	2005	√	√	√
14	Capstaff and Marshall	2005	√	√	√
15	Heaney and Winata	2005	√	√	√
16	Brown et al.	2006	√	√	√
17	Davies et al.	2006	√	√	√
18	Géczy et al.	2006	√	√	√
19	Hu and Wang	2006	√	√	√
20	Jin and Jorion	2006	√	√	√
21	Kim et al.	2006	√	√	√
22	Chiang and Lin	2007	√	√	√
23	Dolde and Mishra	2007	√	√	√
24	Nguyen et al.	2007	√	√	√
25	Rossi	2007	√	√	√
26	Spanò	2007	√	√	√
27	Clark and Judge	2008	√	√	√
28	Klimczak	2008	√	√	√
29	Krajcar et al.	2008	√	√	√
30	Lin et al.	2008	√	√	√
31	Alsubaie	2009	√	√	√
32	Bartram et al.	2009	√	√	√
33	Lin et al.	2009	√	√	√
34	Ramlall (2009)	2009	√	√	√
35	Schiozer and Saito	2009	√	√	√
36	Aabo et al.	2010	√	√	√
37	Fauver and Naranjo	2010	√	√	√

38	González et al.	2010	√	√	√
39	Khediri	2010	√	√	√
40	Khediri and Folus	2010	√	√	√
41	Lin et al.	2010	√	√	√
42	Wang et al.	2010	√	√	√
43	Afza and Alam	2011b	√	√	√
44	Afza and Alam	2011a	√	√	√
45	Bartram et al.	2011	√	√	√
46	Brunzell et al.	2011	√	√	√
47	Campello et al.	2011	√	√	√
48	Chernenko and Faulkender	2011	√	√	√
49	Gay et al.	2011	√	√	√
50	Naito and Laux	2011	√	√	√
51	Samitas et al.	2011	√	√	√
52	Wang and Fan	2011	√	√	√
53	Yong et al.	2011	√	√	√
54	Ahmad and Haris	2012	√	√	√
55	Allayannis et al.	2012	√	√	√
56	Dadalt et al.	2012	√	√	√
57	Lin and Lin	2012	√	√	√
58	Mefteh-Wali et al.	2012	√	√	√
59	Sprčić and Šević	2012	√	√	√
60	Yip and Nguyen	2012	√	√	√
61	Alam et al.	2013	√	√	√
62	Bashir et al.	2013	√	√	√
63	Búa et al.	2013	√	√	√
64	Choi et al.	2013	√	√	√
65	Dionne and Triki	2013	√	√	√
66	Magee	2013	√	√	√
67	Marshall et al.	2013	√	√	√
68	Panaretou et al.	2013	√	√	√
69	Pérez-González and Yun	2013	√	√	√
70	Rossi	2013	√	√	√
71	Sang et al.	2013	√	√	√
72	Chaudhry et al.	2014	√	√	√
73	Aabo et al.	2015	√	√	√
74	Jankensgård	2015	√	√	√
75	Afza & Alam	2015	√	√	√
76	Kouser et al.	2016	√	√	√
77	Khan	2016	√	√	√
78	Giraldo-Prieto	2017	√	√	√
79	Carter et al.	2017	√	√	√
80	Ghosh	2017	√	√	√

81	Bliss et al.	2018	√	√	√